THE

Medical and Physical Journal.

VOL. III.] FEBRUARY, 1800. [NO. XII.

A Communication concerning the Eruptions resembling the Small-Pox, which sometimes appear in the inoculated Vaccine Disease; by GEORGE PEARSON, M.D. F.R.S. *Physician to St. George's Hospital, &c.*

FOR reasons, the explanation of which would lead into too long a detail, and which, indeed, cannot be given with perfect propriety in this sheet, I feel myself compelled to publish a few observations concerning the eruptions which appear, in some instances, in the cow-pock by inoculation.

Although the new inoculation in the present year has been, I think, sufficiently extensive to manifest the advantages of it over that of the small-pox, so that it is not likely to be ever laid aside; yet, the unexpected appearance of eruptions has inclined many persons to be of opinion, that no beneficial consequences can be produced by this practice; or, at least, that such consequences, at best, seem to be problematical. It may be useful to observe, that some of the advocates for the cow-pock inoculation contend, that eruptions are never produced by it; accordingly they assert, that in these eruptive cases the disorder was not the cow-pock, but the small-pox; the variolous poison having either been inserted inadvertently, or the constitution having been affected by it casually. To justify what is advanced, it is incumbent on the Assertors, either to prove that such errors have been committed; or, at least, they ought to be able to oppose equally extensive experience to that of the adverse party; for no sound reasoner will consider opinions which are only founded on conjecture to be demonstrated truths. I will not, however, take upon myself the unrequired task of attempting to vindicate others from the above charges, but I shall only perform a duty in stating the result of my own experience with regard to the point in question; conceiving, that by this means, the truth may be brought to light, in conjuction with the evidence from experience of future Inquirers.

of the variola. I have good evidence alfo to fhew, that even in the hands of thofe very Inoculators, who, a little time ago, would not allow that the vaccine poifon could produce eruptions, fuch cafes have lately occurred.

In the month of October laft I inoculated a child, two years of age, with the vaccine poifon. The original matter which had produced this matter, I took from the cow in March laft since which time the vaccine difeafe had been excited by it, in my hands, in a great number of patients.

The vaccine difeafe took place with the ufual appearances in the inoculated part, and effected the whole conftitution in the ordinary manner; but a few eruptions broke out on the fecond or third day, after a flight fever; they were, however, only the red large pimples afore-mentioned, and, of courfe, not at all like the fmall-pox. Mr. Keate carried matter from this child to Brighthelmftone, where Mr. Barret inoculated two children, who took the difeafe, and from one of thefe Mr. Keate inoculated three children. They all had the ufual fever about the eighth day, and all had a number of eruptions except one, who had only five or fix, and thofe dried on the fifth day. This laft cafe was probably that which Mr. Keate informed me had in the inoculated part the genuine vaccine puftule; but in all the others, Mr. Barret obferved, that in the inoculated part the puftule was ragged at the edges, and flat, moft refembling the variolous puftule. Matter from thefe patients was fent to Petworth, where Mr. Andre informs me, he inoculated with it fourteen children. They all took the difeafe, and had eruptions like the variolous. Three children at the breaft had from three to twelve puftules, the remaining eleven children had from fifty to feveral hundred eruptions. The ftate of the arms, and the characters of the puftules of the inoculated part are not mentioned. None of the above patients died; nor is any mention made by Mr. Keate, Mr. Barret, and Mr. Andre, even of any apprehenfion of danger. I add, that about a month ago, Dr. Thornton fent the cafe with eruptions, produced by matter which I originally took from the cow.

According then to experience, we draw thefe conclufions: 1ft, That in certain conftitutions, or under the circumftances of certain co-operating agents, the vaccine poifon produces a difeafe refembling the fmall-pox; and of courfe, the puftule in the inoculated part is very different from that of the vaccine pock ordinarily occurring, and the eruptions refemble very much, if not exactly, fome varieties of the fmall-pox.

2d. That in fome inftances thefe eruptions have occurred, although the inoculated part exhibited the genuine vaccine puftule.

3d. That the matter of ſuch eruptive caſes, whether taken from the inoculated part, or from other parts, produces univerſally, or at leaſt generally, ſimilar eruptive caſes; and has not, I believe, been ſeen to go back, by paſſing through different conſtitutions to the ſtate in which it produces, what is called the genuine vaccine diſeaſe.

4th. That eruptions of a different appearance from variolous ones, ſometimes occur in the true cow-pock.

Now, whether the vaccine poiſon, when it produces theſe caſes reſembling the ſmall-pox, really becomes by compoſition or decompoſition, variolous matter, is undetermined. If this ſhould be found to be the caſe by future experiments, ſtill we muſt conſider the two poiſons as of diſtinctly different ſpecies, on account of the different characters of the puſtule in the ſmall-pox and cow-pock: although, as juſt ſaid, by the combination of ſome other ſubſtance with the cow-pock poiſon, or by the ſeparation of ſome one of the conſtituent ingredients of the poiſon, the variolous may be produced. To illuſtrate this theory, let it be conſidered, that magneſia and ſulphate of magneſia are different ſpecies of ſubſtances, although they agree in ſome of their principal effects on the human conſtitution, and in ſome other properties; but, by the union of magneſia with ſulphuric acid, it becomes ſulphate of magneſia: or, the illuſtration may be given converſely. As, then, we have diſtinct denominations for theſe two ſubſtances, ſo we ought to have them for the two poiſons, and the two different diſeaſed ſtates they produce, namely, the cow-pock and the ſmall-pox. Accordingly, Dr. Odier, of Geneva, whoſe powers as a Dialectician, and whoſe acuteneſs as a Philologer, I can atteſt from the period of his academical ſtudies, has "baptized" (to uſe the term of Dr, De Carro) the new diſeaſe, *la vaccine*, or *vaccina*; rejecting, as abſurd, the name of the Engliſh, *variolæ vaccinæ*.

But, to return to the immediate queſtion under diſcuſſion; granting, that variolous-like eruptions are liable to be produced by the inoculation of the cow-pock; what difference ought this accident to make in our eſtimate of the value of the new practice, from the eſtimate made on the ſuppoſition, that no ſuch eruptions would occur? I apprehend the value is hereby depreciated, but not to ſuch a degree as to create any reaſonable apprehenſions of the failure of the vaccine inoculation, in ſuperſeding and finally extinguiſhing the ſmall-pox: becauſe,

1. If the precaution be taken of avoiding inoculation with matter from eruptive caſes, as far as I have ſeen, not above one

one case with variolous-like eruptions will be produced among two hundred instances of inoculated cow-pock.

2. These eruptive cases, as far as I have observed, are not more severe than the ordinary kinds of inoculated small-pox.

3. I have seen no disfiguration of the skin from this variety of cow-pock; but I think it just to acknowledge, that from the experience I have had, no Practitioner can answer for such cases not occurring in any instance; and, as danger is always in proportion to the number of eruptions, which number, no person can pretend to limit; it is evident, that the chance of life during this disease is lessened, although but a very little. Provided this statement be made to the patient, it does not appear to me, that the fact of the liability to eruptions ought to impede the progress of the vaccine inoculation; but if, on the contrary, the patient be assured that such eruptions will not occur, there is good ground for the practice falling into discredit, or at least, with reason, for many persons being discontented. After this representation of an unfavourable part of the history of the cow-pock, it is consolatory to be able to counterpoise it with some new facts, which, like that of the eruptions, have been discovered in the course of further experience. It now appears, that a person who has had the small-pox, is not susceptible of the cow-pock by inoculation;* nor is a person susceptible of the constitutional affection from the cow-pock poison more than once. On the whole, then, we have gained, perhaps, as much as we have lost, since the publication of the original account. And, unless some new adverse facts shall be discovered, and confiding that the Public will adopt a method which is manifestly to their interest, the change effected in medical practice *will be so eminently memorable, that the introduction of the vaccine inoculation must become an epoch in the history of physic.*

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN your Journal for the present month, I observe an extract from a paper sent you by Dr. Pearson, on the appearance of pustules

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* The cases of milkers, with chopt hands, being repeatedly affected with sores from the cow-pock poison, applied in milking, whether they had undergone the small-pox or not, probably occasioned the error of the conclusion here alluded to.

pustules resembling the small-pox in the vaccine inoculation. When I have had an opportunity of perusing this paper, I may probably request the favour of you to give room to some comments upon it; in the mean time, it may be proper to remark, that from the commencement of my inoculation with the vaccine virus to the present day, no pustules, similar to the variolous, have in any one instance appeared. I have seen rashes, and sometimes (though very rarely) I have observed a few scattered pimples about the body; indeed, it has often appeared singular to me, on reflecting how frequently local cuticular inflammation and irritation (whether arising spontaneously, or from the application of acid substances) occasion such appearances, that they should have occured so seldom.

Time will develope the mystery before us; at present I very much suspect, that where *variolous pustules* have appeared, *variolous matter* has occasioned them. The many obscure ways by which it may effect the system, must be too obvious to require explanation,

I remain, GENTLEMEN,
Your obedient humble servant,
E. JENNER.

Berkeley, Jan. 13, 1800.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE success which attended the use of the opiate friction in several cases related by Mr. Ward, of Manchester, induced me to try it in the following, wherein it was attended with the most beneficial effects. If you think it worthy a place in your valuable Journal, you are at liberty to insert it.

I remain, GENTLEMEN,
Your very humble servant,
THO. DOCKER,
Surgeon to the Forces.

Deal, Dec. 22, 1799.

JOHN BAYLIS, of the Third Regiment of Guards, was received into the Military Hospital at this place, from Holland, as a venereal patient. Upon examination, I found a considerable sphacelation in the groin, from a bubo which had been opened some

ſome time. It was then rapidly increaſing, and from the general ſtate of his health, I had every reaſon to fear a fatal termination. The part was ordered to be fomented, and the carrot poultice applied; he had cordials, with bark and opium preſcribed, and as much wine as he could take; but notwithſtanding, the ſphacelation ſtill continued to advance. Oct. 12. This morning I found him extremely ill, the attendants thought he would have died in the night. His ſtomach rejected every thing he took; his pulſe could ſcarcely be counted; a diarrhœa had come on, and his groin preſented a moſt ſhocking appearance. I concluded that a few hours would have terminated his exiſtence. It now occurred to me, that opium, introduced by friction, would, probably, be attended with advantage, and I determined to try it as the laſt reſource. I accordingly directed the following to be immediately rubbed into the thighs and legs.

Tinct. opii ℨij. Camph. ℥ſs.
Ol. oliv. ℥ij. vitel. ovi q. s. M.

I viſited him a ſhort time afterwards, and found him, I thought, more compoſed and leſs languid, and he had taken ſome wine without ſickneſs. I directed the ſame quantity to be uſed again, and to be repeated in the courſe of the night, with the addition of one drachm of tinct. opii. Oct. 13. This morning evidently better, had paſſed the night with ſome ſleep, and the inflammation about the edges of the ulcer conſiderably abated; the diarrhœa had alſo ſtopped. I directed three drachms of the tinct. opii to be uſed three times in the courſe of the day. I ſaw him in the evening; he had taken a good deal of wine and ſome ſoup without any ſickneſs, and his pulſe was better; four drachms of tinct. opii were ordered to be uſed during the night. 14th. This morning he appeared in a progreſſive ſtate of recovery, though he had ſlept but little, and perſpired profuſely; but he had had a regular ſtool, and the inflammation about the edges of the ulcer had ſtopped, and its ſurface looked leſs gangrenous. I directed four drachms to be rubbed in every five hours. 15th. A good deal of compoſed ſleep during the night; the inflammation and ſpreading intirely ſtopped; the ſlough ſeparated from the ſound parts, and the ulcer now looked quite clean. He has taken a little wine during the laſt twenty-four hours, and eat ſome fiſh with appetite; the friction continued. 16th. Slept the greateſt part of the night, and awoke greatly refreſhed; friction continued. 17th, The carrot poultice omitted, and the ulcer treated with ſimple dreſſings; the friction continued, and he was directed to take ſome infuſion of bark. 19th. As the bark had created nauſea, I ordered it to be omitted; and as his health and appetite now rapidly improves, I diminiſhed the opium one third. 24th. He has now a very good

good appetite, and the ulcer heals rapidly; the opium diminished one half. 27th. The opiate friction intirely left off, and he is directed to take the decoction of bark, with elixir of vitriol. Nov. 13th. The ulcer is now almost healed, and he is, in other respects, in perfect good health.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF you think the following case of Spina Bifida worthy of notice in your valuable publication, you have the liberty of inserting it.

I am, with great respect,
Your's, very obediently,
FREDERIC THACKERAY.

Cambridge,
Oct. 26, 1799.

Mrs. Z. of this place, was delivered of a boy on the 20th of August, perfect, in every respect, except about the loins, where there appeared a vesication, which seemed to have been burst during the child's passage through the pelvis, and from which came a copious serous discharge, tinged with blood. In the course of ten days it assumed more the colour of the skin, discharging very little, and rising into a tumour of the size and shape of a small mushroom, concave on the top.

The child thrived very much, but expressed signs of pain, and tossed about its arms, when the tumour was pressed upon. Its legs it scarce ever moved, till the day on which it died, which was the thirtieth from its birth, when this swelling ulcerated and became flat, discharging a fluid resembling the tears. For some hours he now moved his eyes briskly, was in great agony, his whole body shrunk; and after a succession of convulsive fits, affecting only his face and arms for a few hours, he died.

Dissection.—The spinous processes of the lumbar vertebræ were wanting. The spinal marrow which passes through them and the tumour were removed together; it consisted of a sac, formed where the spinous processes were deficient, communicating upwards by a small orifice with the groove for the spinal marrow, up which I could introduce a probe two inches, and from which came a tea spoonful of purulent matter. From the spinal morrow arose a fungus, making a column in the centre of

of the sac, and inserted into the top of the tumour. The fungus thus attached, explained its concave appearance, as the sides had greater liberty to distend themselves, and thus, perhaps, the pressure was in some degree removed from the spinal marrow, for the sac pressed chiefly on the transverse processes of the spine.

This tumour was nourished in an unusual manner; there was a single vessel coming from the membrane of the spinal marrow, running unconnected with the body of the fungus, and inserted into the top of it by two branches.

The fungus appeared like those we meet with, after the trepan has been used, and the dura mater pierced.

Where Nature has been so deficient, Art can apply no substitute. Pressure must do harm; we might contrive something to protect the part from that, and, perhaps, prolong a life that we cannot hope to preserve. In this instance, the pressure of the distended sac produced a paralysis of the lower extremities, which was removed when it was ruptured. I do not think it communicated high up the spine, as pressure on it only excited crying, and made the infant toss about its arms. It slept, sucked, and had evacuations as other infants. It was most quiet when lying on its back, in the hollow formed between the two knees of the nurse,

The tumour was, probably, perfect in utero, and burst in its passage; its mother says, it moved as brisk as any child she ever had.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

NOTHING, in my opinion, can be more serviceable to the community at large, than laying before them a method of obviating complaints which have caused the greatest desolation, and which at this season of the year are more immediately prevalent. It is a duty which every humane being must feel satisfied in performing; and though our services may not meet with that attention they deserve, the consciousness of having displayed the means, will, of itself, be a sufficient recompence.

In May, 1798, the child of John J———, (then resident at Coventry, but now an inhabitant of S——y,) aged two years, was attacked with a severe pain in the head, and cough, which, by diminishing his appetite, and his parents being unable to

procure him proper fupport, reduced him to a very weak condition. Medical advice was obtained, and but little benefit derived; the cough ftill continued, and a gradual wafting of the body enfued. Providentially for the helplefs fufferer, the father was informed by a clergyman, who occafionally practifed phyfic, of the falutary effects of yeaft, (or, as it is ftiled here, barm,) in fuch cafes; this medicine having been adminiftered by him to feveral infants in a fimilar fituation, and with the moft beneficial effects.

They confented to try it, and the child was to take three tea fpoonfuls night and morning. For the firft week, no apparent advantage was derived; the body was rather purged, and they feared it would weaken him too much. The diet was fimple, milk or broths, for his appetite was fmall; though he was occafionally permitted to have a little raifin wine diluted with water.

Towards the end of the fecond week, the cough confiderably abated, the colour became more diffufed, the purging was inconfiderable, and his appetite amended; and, with gentle exercife, his ftrength rapidly returned. The parents continued the ufe of it only three weeks, and at the conclufion of that period the child was perfectly recovered. It is now a year and a half fince his indifpofition, and from that time to this he has experienced no return of his former complaints, but is a ftout, healthy boy.

It was in confequence of witneffing this fingular recovery, that a woman, whofe child was nearly in the fame fituation, determined to try the efficacy of the yeaft, and in a month the patient was reftored, to the inexpreffible joy of the mother, and furprife of thofe who had been acquainted with the circumftances. During the adminiftration of the yeaft to both, no other medicine was reforted to, nor were they attentive to diet. I never knew it given in fuch a cafe before; but as it has been productive of the moft happy effects in the two firft, I fhall not only recommend it to every one, but the firft opportunity that occurs fhall give it another trial.

The yeaft preferred was the neweft, becaufe it was not fo aperient as the ftale, and to both the children it was given by itfelf; it neither occafioned naufea, flatulence, nor pain.

If you think this information worthy a place in your excellent publication, I fhall feel myfelf honoured by its infertion; and hope fome gentleman of extenfive practice will obferve its influence, and favour the public with his obfervations.

I have the honour to be,

GENTLEMEN,

Your humble fervant,

Winflow, Novr 17, 1797.

J. H. GROSE.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following remarks were occasioned by a paragraph in your number for September; and are an extract from a letter which I lately received from a much esteemed friend, who, though not a professional man, considers medicine as not the least important branch of those general philosophical pursuits, which form the chief amusements of his leisure hours. You will, perhaps, think them of importance enough to merit insertion in your very useful Journal. I am,

GENTLEMEN,

Your most obedient servant,

Newport, Isle of Wight,
Dec. 26, 1799.

R. SCOTT, M. D.

" I was very much pleased with the observations of Dr. Chisholm, as given in the number of the Medical Journal which you sent to me, and with the application by the Editors, of his opinion respecting the *Cachexia Africana* to that very remarkable disease with which so many females in civilized life are at a certain age affected. I have for some time entertained a similar notion of the nature of that disease, but wanting opportunities of observation, and the means of inquiry, I had never thought of it farther than as a mere surmise of the fancy. It, indeed, appears to me to be by no means a new supposition, but to have occurred to many Pathologists who have attentively considered the disease, especially to those two eminent Nosologists, Sauvages and Cullen. As probable causes of their deserting it, and of their recurring to other, and, in my humble opinion, much less plausible hypotheses, we may assign a dread of out-stepping their own particular province, and perhaps too a wish to keep up the dignity of a man, and a fear of propagating an opinion which might, in improper hands, be made prejudicial to morality and the purity of social life.

" In a philosophical view, however, the sexual passion cannot be overlooked; and all must acknowledge its iufluence, even when degraded to mere sensualism, and stripped of that irresistible attraction which the necessary restraints and the general refinement of civilized life give to it. You are not to think that the attributing this disease to ungratified passion, supposes the other sex to be more subjugated to animal desires

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than ours. Although, indeed, ſuch an opinion might be ſaid to prove the inferiority of women in one reſpect, it would ſtill add to their character of chaſtity, and ſhew how much ſuperior they are to us in point of continence and ſelf-reſtraint. But far higher of the ſex I deem, than to imagine that in any view, whether of being more under the influence of paſſion, or in point of intellectual endowments, they are inferior to us; except you eſteem as a mark of inferiority what adds ſo much to their charms, that high ſuſceptibility of feeling which they generally poſſeſs, and which, in part, proceeds from the greater delicacy of bodily ſtructure, but chiefly, as I apprehend, from their peculiar education and habits in civilized life.

" I ſhould maintain that the male is, from having the ſame feelings and paſſions, equally liable as the female to this or a ſimilar diſeaſe (there neceſſarily ariſing a difference of bodily functions); and that we are to ſeek for the cauſe of its being in a manner confined to the latter in the very different circumſtances in which each ſex is placed.

" At the age at which this moſt powerful of all the paſſions begins to exert its influence on our frame, we are juſt entering on the buſy ſtage of life; where the great difference of ſcenery from what we have hitherto been accuſtomed to, the ardour we generally ſet out with, the deſire of diſtinguiſhing ourſelves, the freedom from reſtraint we now feel, and the difficulties we ſoon encounter, totally abſorb for the moſt part our mind, and prevent it from indulging in thoſe reveries, which when otherways unemployed, our imagination, conſtantly in action, is always forming.

" But the caſe of the female is widely different. Being in general endowed by Nature with keen feelings and a warm fancy, but, above all, having received from her preceptors and others high notions of the extreme delicacy and circumſpection required of female deportment, ſhe ſees herſelf placed upon a pinnacle, where ſhe is viewed by all around her with the moſt ſcrutinizing eye, and from which the leaſt lapſe of conduct would precipitate her into utter contempt. She cannot enter into thoſe active duties, that engage the attention of the male, and render him, if prudent, independent. She is precluded from being ever the firſt in thoſe advances which lead to that tender and laſting union of the ſexes, to which we are ſo ſtrongly prompted by Nature, and which conſtitutes ſo great a ſhare of our happineſs.

[To be continued in our next Number.]

STATE OF DISEASES IN LONDON.

Account of Diseases in an Eastern District from the 20th of November to the 20th of December, 1799.

	No. of Cases.		No. of Cases.
ACUTE DISEASES.		Prurigo	3
Typhus Gravior	4	Dropsy	4
Typhus Mitior	8	Anasarca	4
Pneumonic Inflammation	7	Hemiplegia	1
Scarlatina Anginosa	6	Epilepsy	1
Acute Rheumatism	4	Nephralgia	1
Hepatitis	1	Dysuria	3
CHRONIC DISEASES.		Chlorosis	5
Catarrh	15	Hysteria	2
Cough and Dyspnœa	17	Amenorrhœa	4
Cough	10	Menorrhagia	2
Hæmoptoe	1	Fluor Albus	4
Phthisis Pulmonalis	4	Chronic Rheumatism	15
Pleurodyne	3	PUERPERAL DISEASES.	
Hydrothorax	2	Menorrhagia lochialis	4
Dyspepsia	5	Dolores post partum	3
Vomitus	2	Ephemera	4
Gasttrodynia	4	Mastrodynia	6
Diarrhœa	10		
Dysenteria	3	INFANTILE DISEASES.	
Enterodynia	2	Measles	5
Colica	2	Scarlatina	3
Scrophula	2	Hooping Cough	3
Icterus	2	Rachitis	2

The number of febrile diseases, particularly of the contagious kind, has lately increased to a considerable degree. The different species of typhus have prevailed, and, in some parts of the town, have proved uncommonly fatal. The scarlatina anginosa has also been very general, though not in many instances attended with its most formidable symptoms, nor in any of those referred to in the list has it proved fatal.

The very striking change which has taken place in the state of the weather, whilst it promises to lessen, if not remove, the tendency to complaints of an infectious or contagious nature, is likely to produce, or to aggravate, diseases of a different class. The easterly and north-easterly winds, which have lately prevailed, have as usual, increased the number of patients labouring under diseases of the chest. The bastard peripneumony has affected a number of patients in the decline of life, to some of whom it threatens to prove fatal; whilst a hard and dry cough has proved very troublesome and obstinate in many cases of persons at an earlier period.

Account

Account of Diseases in an Eastern District from the 20th of December, 1799, to the 20th of January, 1800.

	No. of Cases.
ACUTE DISEASES.	
Typhus Mitior	6
Pneumonic Inflammations	4
Catarrh	10
Peripneumonia notha	7
Acute Rheumatism	4
CHRONIC DISEASES,	
Cough with Dispnœa	20
Cough	16
Hæmoptoe	3
Pleurodyne	2
Phthisis Pulmonalis	5
Hydrothorax	4
Gastrodynia	5
Dyspepsia	7
Anorexia	2
Diarrhœa	5
Dysentery	2
Enterodynia	3
Hæmorrhois	2
Procidentia Ani	1
Abortus	1
Menorrhagia	2

	No. of Caces.
Amenorrhea	3
Fluor Albus	3
Gravel	1
Icterus	1
Dropsy	3
Anasarca	4
Hemiplegia	1
Epilepsy	1
Hysteria	2
Chronic Rheumatism	13
Scrophula	4
Prurigo	2
PUERPERAL DISEASES.	
Milk Fever	2
Ephemera	3
Dolores post partum	5
INFANTILE DISEASES.	
Measles	4
Hooping Cough	2
Ophthalmia	2
Dentition	2
Convulsio	1
Vermes	2

A considerable proportion of the diseases contained in the foregoing list had their seat in the chest; and, as it might well be expected, their number was increased, and the symptoms of them were aggravated by the severity of the weather. The degree of cold, though not so intense, nor of so long duration, as in the last winter, yet gave rise to a great number of these complaints. Cough, Dyspnœa, Catarrh, and Peripneumony have been attended with very severe symptoms, and have proved, in many instances, unusually tedious and obstinate. Peripneumonia notha has very frequently occurred in persons far advanced in life, and in a number of cases has proved fatal.

The symptoms of Phthisis Pulmonalis have also been much aggravated, and have advanced speedily to a fatal termination.

The measles have lately been very prevalent, and have proved fatal in a number of instances. It appears by the weekly bills of mortality, that a large number has died of this disease during the months of November and December, a number amounting to more than one half of deaths, by this disease, during the whole year.

The Small-pox has proved a less fatal disease during the last year than the preceding one, in which 2237 are stated in the general bill of mortality, as the number of deaths; whereas, in the last year, they amounted only ro 111. By recurring to a monthly register, we find that in January, February, November, and December, two thirds of the whole number fell a sacrifice to this disease.

The Diſeaſes and Caſualties of the Year 1799.

Abortive and Stillborn	580
Abſceſs . .	27
Aged . .	1343
Ague . .	3
Apoplexy and Suddenly	249
Aſthma and Phthiſick	663
Bedridden . .	2
Bleeding . .	16
Burſten and Rupture	20
Cancer . .	48
Childbed . .	131
Colds . .	14
Colic, Gripes, and Twiſting of the Guts .	8
Conſumption .	4843
Convulſions .	3794
Cough, and Hooping Cough	451
Cramp . .	1
Croup . .	16
Diabetes . .	1
Dropſy . .	906
Ear-ach . .	1
Eaten by Lice .	1
Evil . .	5
Fevers of all kinds .	1784
Fiſtula . .	3
Flux . .	5
French Pox . .	23
Gout . .	91
Gravel, Stone, and Stranguary . .	11
Grief . .	4
Headmouldſhot, Horſhoe-head, and Water in the Head .	76
Jaundice . .	78
Jaw Locked . .	1
Impoſthume . .	1
Inflammation .	433
Itch . .	2
Leproſy . .	1
Livergrown .	10
Lunatick .	107
Meaſles . .	223
Miſcarriage .	3
Mortification .	226
Palpitation of the Heart	2
Palſy . .	105
Pleuriſy . .	14
Quinſy . .	1
Raſh . .	1
Rheumatiſm .	3
Scurvy . .	3
Small-pox . .	1111
Sore Throat .	12
Sores and Ulcers .	11
Spaſm . .	2
Stoppage in the Stomach	11
St. Vitus's Dance .	1
Swine Pox . .	2
Teeth . .	335
Thruſh . .	35
Worms . .	11

Bit by a Mad Dog .	2
Broken Limbs .	4
Bruiſed . .	2
Burnt . .	13
Drowned . .	99
Exceſſive Drinking .	5
Executed* . .	12
Found Dead .	10
Fractured . .	2
Frighted . .	2
Frozen . .	2
Killed themſelves .	28
Killed by Falls and ſeveral other Accidents .	64
Murdered . .	3
Poiſoned . .	6
Scalded . .	2
Shot . .	1
Smothered . .	1
Starved . .	4
Suffocated . .	7
Total	269
Chriſtened	

* There have been executed in Middleſex and Surry 25; of which Number 12 only have been reported to be buried (as ſuch) within the Bills of Mortality.

Christened	Males	.	10087	In all 18970
	Females	.	8883	
Buried	Males	.	9046	In all 18134
	Females	.	9088	

Of this number have died,

Under Two Years of Age	5211	Fifty and Sixty	1758
Between Two and Five	1790	Sixty and Seventy	1565
Five and Ten	644	Seventy and Eighty	1125
Ten and Twenty	573	Eighty and Ninety	456
Twenty and Thirty	1299	Ninety and a Hundred	63
Thirty and Forty	1724	A Hundred and One	2
Forty and Fifty	1924		

Decreased in the Burials this Year 21.

Diseases admitted under the care of the Physicians of the Westminster Hospital, from the 18th of Dec. 1799, to the 18th of Jan. 1800.

Fevers	7	Epilepsy	2
Pleurisy	3	Hæmoptoe	2
Scarlatina	2	Hæmatemesis	1
Amenorrhœa	5	Itch	4
Anasarca	4	Lepra Græcorum	1
Ascites	2	Lumbago	1
Asthenia	2	Phthisis	2
Asthma	9	Paralysis	2
Catarrh	2	Rheumatism	8
Cholera	1	Struma	1
Cough	16	Tinea	1
Diarrhœa	7	Vertigo	1
Dyspepsia	4	Urticaria	2
Dysuria	2	Worms	2

Pectoral complaints have not only been uncommonly frequent during the last month, but in *elderly people* especially, they have been attended with untractable symptoms. The practitioner has often found is difficult to decide how far venæsection and the antiphlogistic plan could be usefully persisted in; and in many instances, as often happens in severe winters, the disease has baffled all his attempts to relieve it.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF you think the following cases and remarks on Hydrocephalus Internus worthy a place in the Medical and Physical Journal, it will be esteemed a favour to insert them.

I am, &c.
W. WHITE.

Bath City Dispensary, Dec. 7, 1799.

The first of the cases alluded to, occurred between four and five years ago; the subject of it was a boy seven years of age, and of a muscular, sanguine temperament. His mother informed me, that for a month previous to applying for advice, he had, at intervals, complained of a pain in his head, attended with loss of appetite and strength. Sometimes he vomitted, once or twice a day; at other times, once in two or three days; he had also fallen down on the floor several times in fits; he had been thirsty and feverish. When I first saw him, he lay in a state of total insensibility, which had been preceded by a violent, acute pain in his head. On examination, the pupils of his eyes were found much dilated, and did not apparently possess the smallest degree of irritability. His face was flushed; his urine discharged involuntarily, and his bowels were costive; he made a constant noise, and his lips were in perpetual convulsive motion. I immediately opened the temporal artery, ordered his head to be shaved, bathed with vinegar, a blister to be there applied, and another betwixt his shoulders. He took small doses of calomel combined with digitalis, and occasionally a draught composed of Mist. camphor. spt. æther. vitriol. comp. and tinct. opii. As purgatives produced no effect in stimulating the intestines, clysters were resorted to for that purpose. After remaining in the state above described about a fortnight, evident symptoms of amendment took place, and he soon recovered his usual strength.

CASE II.

Aug. 19.—William Sedman, aged nine, of a dark complexion and spare habit, was seized, three days ago, with a violent pain in his head, attended with vomiting; the latter has ceased, but the former has continued so acute as to make him frequently scream out; at other times he lies in a comatose state: has had several convulsion fits. He takes no food, except

cept when a little liquid is forced into his mouth with a tea-ſpoon. His pulſe is quick, and ſmall; ſkin temperate; tongue tolerably clean. When ſenſible, complained of thirſt; bowels coſtive; urine diſcharged involuntarily, and copiouſly. For a fortnight previous to this attack, his father noticed his being hot at night. On the firſt day of his illneſs, an emetic was given, which brought off a great quantity of bile from his ſtomach. The following medicines were preſcribed:

℞. Calomel. ppt. gr. iij. Conſerv. roſ. q. ſ. ſit. ft. pil. ſtatim. ſumend.

℞. Magnes. vitrol. ℨij. ſolve in
Aq. pur. ℥ij. cui add.
Aq. menth. pip. ℥ij. ft. miſtur. cujus capiat cochl. j. amplum quarta quaque hora.
Applicetur emplaſt. Canthar. inter ſcapul.

Aug. 20.—11, A. M. He ſtill continues in an inſenſible ſtate. The pupils are dilated; but at the approach and removal of a lighted candle, they alternately contract and dilate, although he does not take the leaſt notice of any of the ſurrounding objects. Pulſe rather ſlower than yeſterday. Bowels have been moved once.

Applic. hirudines ſex temporibus.
Repet. pil. Calomel. ſtatim.

℞. Pulv. fol. digital. purpur. gr. $\frac{1}{4}$.
Calomel. gr. j. Conſerv. roſ. q. s. ft. pil. mane nocteque ſumend.

4, P. M.—Viſited him again, and was informed, that in about ten minutes after the leeches came off, his ſenſes returned; he requeſted ſomething to eat, and made water voluntarily.

Aug. 21.—11, A. M. He continues ſenſible, and tolerably free from pain; was reſtleſs till about one o'clock in the morning, after which he had four hours ſound ſleep. Pulſe rather quicker than yeſterday; has had two motions, but makes very little water.

℞. Kali acetat. ℨj,
Aq. menth. pip.
—— pur. aa ℥ij.
Sumat cochl. j. magn. 4ta. quâque horâ.

8, P. M.—About five o'clock this afternoon he had a febrile acceſſion with ſlight delirium. Has made more water. Complains rather of a pain in his head. Has had no ſleep ſince the morning. The following draught was preſcribed,

℞. Aq. menth. pip. ℨvi.
Miſt. Camphor ℨij.
Tinct. opii. gtt. viij.
Spt. ætheris vitriol. comp. gtt. xx. M.

Aug.

Aug. 22.—Has been reſtleſs during the night, although he took the draught. Complains rather of pain in the left ſide of his head; at intervals appears ſlightly delirious; has had one looſe ſtool. Had no return of the febrile acceſſion yeſterday evening.

Applic. iterum hirudines tres tempori ſiniſtro.
Perſtet in uſu pil. digital. & miſtur.

Aug. 23.—Has had a very good night without an opiate; pain in his head relieved, and remains quite ſenſible.

Repet. med.

24.—Continues to mend.

Pergat.

27.—Has now no complaint but debility; and of that he quickly recovered.

CASE III.

Sept. 10.—Suſannah Harris,* aged 46, of a dark complexion and ſpare habit, complained of a pain in her head, chiefly acroſs the *os frontis*, and ſometimes at the *occiput*, accompanied with a ſenſation of weight. The pain was at intervals ſo acute that ſhe could ſcarce refrain from ſcreaming out, and was much increaſed when ſhe lay in an horizontal poſition. She alſo complained of dimneſs of ſight, objects appearing double, and of various colours. She was often ſick, and vomited; what ſhe threw off taſted ſour and bitter. Had frequent ſhiverings in the courſe of the day, ſucceeded by hot fluſhings; ſhe had alſo great anxiety and reſtleſsneſs. Her pulſe was hard and frequent, but had not a full ſtroke; ſkin warm; tongue white, although ſhe had not much thirſt; her bowels were regular, and ſhe made a proper quantity of water. Her appetite was not very good, and ſhe reſted badly at night. Several of her fingers were clenched, and ſhe had a great deal of convulſive motion. The catamenia were upon her. She had been ill about three weeks, and was at firſt ſeized with an head-ach and chillneſs.

Mittatur ſang. ad ℥xij.

℞. Calomelas gr. vj.
Pulv. Jalap. gr. viij. ft. bol. mane ſumend.
Sumat miſtur. ſalin. ℥j. 4ta qhaque horâ.

The blood was exceedingly ſizy, aſſuming the cup-like appearance.

11.—The pain in her head was much abated; pulſe not ſo hard,

* I would obſerve in this place, that, on inquiry, I found ſhe had received a blow on the head, ſome time previous to her illneſs.

hard, and leſs frequent; ſkin cool; tongue cleaner. Her fingers were not ſo much contracted, and her ſight was rather better. The bolus had opened her bowels ſufficiently. She was ordered to continue the mixture.

12.—Her head was rather more painful than yeſterday. Pulſe ſomewhat increaſed in hardneſs and frequency.

Admoveantur hirudines ſex temporibus, et imponatur Empl. Canthar. inter ſcapul.

Contin. miſt. ſalin.

13.—Her head was much better, and the anxiety and reſtleſſneſs conſiderably abated. Pulſe leſs hard and frequent. She had quite recovered the uſe of her fingers. Her bowels were open.

Repet. miſtur.

15.—Her head free from pain, but the dimneſs of ſight not entirely removed.

Repet miſtur.

18.—Head ſtill continued eaſy. Pulſe ſmall and weak, but by no means quick. Her reſt at night was much better. She had ſtill ſlight febrile alternations.

Repet. miſtur.

25.—Had no return of pain in her head, and felt no complaint but debility, on which account a cordial mixture was preſcribed.

I am extremely ſorry to add, that in the courſe of ten days I was again requeſted to viſit her, although at the laſt report ſhe was able to attend at the Diſpenſary herſelf. She now complained of a violent pain in her ſtomach, accompanied with ſickneſs and vomiting; her pulſe, as at firſt, was hard and frequent. As the ſymptoms indicated a re-commencement of inflammatory action, eight ounces of blood were taken from her arm, which exhibited the ſame appearance as before. As her head ſeemed but little affected, I apprehended there might be a metaſtaſis of the inflammation to the ſtomach; to which part a bliſter was applied, and a ſaline draught in the effervеſcing ſtate ordered to be given every four hours. By theſe means her ſtomach was relieved from the violence of the pain, but the ſickneſs and vomiting ſtill continued. There was no evacuation from the bowels, unleſs by means of purgatives. Her head became again more affected with pain, particularly in the left ſide, and was ſometimes violently agitated with convulſive motions. The pupils were more than uſually contracted, and ſlightly ſenſible to the ſtimulus of light, ſo that ſhe could diſcern objects, though but confuſedly. Her pulſe became preternaturally ſlow. She was perfectly ſenſible.

Notwithſtanding the application of leeches to her temples, and

and a bliſter to her head, with various other remedies, ſhe died in the courſe of a fortnight.

On examining the head, the right lateral ventricle was quite empty, but the left lateral one contained about half an ounce of clear fluid. Neither the veſſels of the *dura* or *pia mater* were turgid with blood; the ſinuſes were alſo empty. No other morbid appearance was obſerved.

The two laſt caſes, I think, clearly demonſtrate the great utility of evacuation principally; and if this propoſition be granted, it will naturally follow, that where evacuation is proper, ſtimulants muſt be the reverſe. It is true, ſome medicines of alledged ſtimulant power were exhibited; but that was chiefly with a view to palliate certain ſymptoms, and then, not till after evacuants had been employed.

In this diſeaſe, we have not only to lament the frequent inſidious and equivocal nature of its ſymptoms, but alſo the oppoſite opinions that are ſtill entertained by medical writers, reſpecting its nature or proximate cauſe, which much prove an additional embarraſſment to the young practitioner.

Dr. Whytt, to whom we are greatly indebted for a very minute deſcription of the ſymptoms uſually attendant on the diſeaſe, obſerves, "The immediate cauſe of every kind of dropſy is the ſame, viz. ſuch a ſtate of the parts as makes the exhalent arteries throw out a greater quantity of fluids than the abſorbents can take up." Which ſtate, from what he afterwards mentions, he evidently conſidered as conſiſting in debility.

Dr. Darwin thinks inactivity, or torpor of the abſorbent veſſels of the brain, is the cauſe of *hydrocephalus Internus*; yet, in another part of his work, he acknowledges, that the torpor of the abſorbent veſſels may frequently exiſt as a ſecondary effect.

Mr. Brown ſays, "that hydrocephalus internus is evidently a diſeaſe of debility, and requires remedies which increaſe the excitability of the ſyſtem."

There are likewiſe others who view the ſubject in a very different light; and, I think more properly. Dr. Withering obſerves, that in very many caſes, if not in all, congeſtion or ſlight inflammation, are the præcurſors to the aqueous accumulation.

Dr. Ruſh is of opinion, that inſtead of being conſidered as an idiopathic dropſy, it ſhould be conſidered only as an effect of a primary inflammation, or congeſtion of blood in the brain. "It appears, (ſays he) that the diſeaſe, in its firſt ſtage, is the effect

fect of causes which produce a less degree of that inflammation which constitutes phrentis; and, that its second stage is a less degree of that effusion which produces serous apoplexy in adults. The former partakes of the nature of the chronic inflammation of Dr. Cullen, and the asthenic inflammation of Dr. Brown." I have taken the liberty (he farther adds) to call it phrenicula, from its being a diminutive species or state of phrenitis."

Dr. Beddoes says, he believes it to belong to inflammations, and that, at an early period of the disease, he should be tempted to bleed as largely as in pneumonia.

This difference of opinions, may, in some degree, be accounted for, if we advert to the division of the disease into the acute and chronic species. "In the former, the disease generally proves fatal in less than a month; and it is seldom that more than two or three ounces of blood are found within the ventricles. In the latter species, the patient survives for many months; sometimes for a year or two; and the bones of the cranium are separated from each other to a great distance."

From a variety of other cases of hydrocephalus internus, as well as the preceding, which have fallen under my own observation, I am led to think, that the disease very rarely occurs from mere debility, as a primary cause; but that debility is an effect induced by a previous excess of action in the arterial system.

The great analogy subsisting between the symptoms which are characteristic of inflammation, and those which form the first stage of the acute species of hydrocephalus internus, together with the good effects often consequent on blood-letting, and the inflammatory appearance which the blood frequently exhibits, are, I think, strong proofs of the disease being an active inflammation. It is very obvious, that the first stage of hydrocephalus internus is attended with an augmentation of the sensibility of the brain, from the violent acute pain of that organ; the painful sensation experienced on the eyes being exposed to the stimulus of light; and the similar painful effect produced by noise on the organ of hearing; which phænomena are considered by nosological writers, as pathognomonic symptoms of inflammation.* Dr. Darwin says, that when the eye is inflamed, light becomes eminently painful, owing to the increased irritative motions of the retina, and the consequent increased sensation. Dr. Rush also observes, that he has remarked an uncommon acuteness in hearing attend two cases of

* A legitimate inflammation is always attended with a painful sensibility in the nerves.—Pearson's Principles of Surgery, p. 5.

of this diſorder: in one of them, the ſparks which were diſcharged from an hiccory fire, produced great pain and ſtartings, which threatened convulſions.

The termination of inflammation by effuſion into the other cavities, is an additional proof of the preceding ſuggeſtions, reſpecting the nature of the diſeaſe; as there are inſtances of pneumonic inflammation terminating in hydrothorax.

The deſcription which has been given by Dr. Geapengieſier of the hydrops plethoricus, ſtill further confirms what I have ſtated, relative to the nature of hydrocephalus. He obſerves, " in the diſſection of thoſe dying of this diſeaſe, (hydrops plethoricus) collections of water have been found over the whole body; but particularly in the cavities of the thorax and cranium, the large veſſels have been found turgid, being diſtended with much blood. When the diſeaſe has been of the acute kind, no inconſiderable inflammations have been obſerved,

For a more particular account of this ſpecies of dropſy, I would refer to the Fourth Volume of the Medical and Chirurgical Review.

With regard to the curative indications of this diſeaſe, the neceſſity of blood-letting cannot, I think, be too forcibly impreſſed upon the minds of young practitioners; and it ought to be carried to ſuch an extent, as to anſwer a determinate end, viz. that of leſſening topical congeſtion, and diminiſhing arterial action. Although the primary ſtage is the only period in which we can reaſonably hope to derive any advantage from this remedy; yet, even when the ſymptoms which characterize the ſecond ſtage have commenced, I would at leaſt adviſe a topical bleeding; as there is reaſon to apprehend, that the ſame effect is ſometimes produced from mere diſtention of the veſſels, as when effuſion has taken place. The ſudden relief ſometimes obtained by bleeding, I think, favours this idea.—In ſhort, I conſider what Dr. Beddoes has ſaid, reſpecting veneſection, to be of more practical utility than all that has hitherto been written on the ſubject.

Purging is alſo neceſſary, not only on account of leſſening determination to the head, but particularly as the ſymptoms, which proceed merely from foulneſs in the ſtomach and bowels, reſemble thoſe of hydrocephalus, and have been frequently ſoon removed by evacuating the bowels;—caſes of this kind are recorded by Dr. Armſtrong and Dr. Underwood.

Bliſters appear alſo proper; and Dr. Ruſh obſerves, that they ſhould be omitted in no ſtage of the diſorder; for even in the inflammatory ſtage, the diſcharge they occaſion from the veſſels of the head greatly overbalances their ſtimulating effects upon the whole ſyſtem: lately it has been recommended to apply them

them in the courſe of the ſutures, and to keep up a diſcharge by means of an iſſue; but as the *ceratum ſabinæ* is capable of exciting a proper diſcharging ſurface, it appears preferable, its application being much leſs troubleſome than that of an iſſue.

I have frequently given the *digitalis*; and I think with Dr. Farrier, that it appears adapted to ſome indication in every ſpecies, and every ſtage of the diſorder; as, promoting abſorption, leſſening irritation, and diminiſhing fever.

With regard to ſtimulants, in the firſt ſtage of this diſeaſe, when there is evidently increaſed action with local congeſtion, they muſt obviouſly do harm; for in that caſe, as Dr. Darwin judiciouſly obſerves, they increaſe the action of the ſecerning, more than of the abſorbent ſyſtem; but, after copious evacuations, the reſiſtance to the progreſs of the abſorbed fluids is removed, and ſtimulants, then applied, increaſe the action of the abſorbent ſyſtem, more than that of the ſecerning one.

This obſervation is exemplified in ſcrophulous ophthalmia, where we find the complaint frequently increaſed by the application of ſtimulants, if uſed previous to the removal of the local plethora, by topical bleeding.

Much has been ſaid in favour of mercury in this diſeaſe; but I muſt confeſs, that I never ſaw any good effects reſulting from its exhibition, uncombined with digitalis.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IT falls to the ſhare but of few medicinal agents to engage ſo much zeal and acuteneſs of obſervation, as have been already beſtowed on Digitalis; and but few, indeed, hitherto diſcovered, have had equal claim to attentive inveſtigation.

It could have been wiſhed, however, that more unanimity in this inquiry had leſs equivocally determined its powers and mode of agency.

Your Journal has been the channel of various opinions on this intereſting reſearch; it probably may not, then, be inconſiſtent with your deſire for diverſity of intelligence on the ſame ſubject, to add to the preceding obſervations of your correſpondents, a brief recital and compariſon of facts, which do not appear to have been yet diſtinctly noticed.

Dr. Moſſman's obſervations on the effects of Digitalis in pulmonary

pulmonary conſumption,* ſeem to have been made with equal impartiality and judgment; and though the general reſult of this practice has been leſs favourable than has occurred in ſome other inſtances (yet it is, perhaps, countenanced by the moſt prevailing experience), ſtill more ſucceſs would have probably accrued from the treatment employed, if ſmall quantities of ſolid animal food, at ſhort intervals, had been ſubſtituted for the more fluid and leſs nutritious ſubſtances, milk and eggs. Theſe are, indeed, not objectionable; but ample experience has fully convinced me, that portions of either pork, mutton, or beef, not exceeding one ounce at a time, rather under dreſſed, well maſticated, and repeated about every two hours until ſix o'clock in the evening, then diſcontinuing the courſe, and reſuming it at about eight the following morning, will prove, in every ſtage of pulmonary conſumption, abundantly more ſtrengthening and ſalutary.

On the powder having repeatedly diſappointed expectation, the reputation of the tincture, the decoction and infuſion, (more particularly that of the firſt) ſhould have reſpectively entitled them to a comparative trial. With me, the power has, in moſt inſtances, either ſpeedily nauſeated, or inordinately increaſed the renal and inteſtinal evacuations; and, under ſuch circumſtances, has wholly failed to amend the pulmonic diſorder.

The experience of Dr. Bree† has been ſingularly adverſe to the ſalutary efficiency of Digitalis in phthiſis pulmonalis. As no effect can happen, however, without a cauſe, ſo the ground of this almoſt uniform failure reſts moſt properly with the Doctor himſelf to explain. Induction from extenſive analogy refuſes to admit, that the digitalis was either abſolutely inefficacious, or neceſſarily noxious. In upwards of one hundred caſes, in which I have lately had occaſion to preſcribe it, it has nearly as invariably alleviated the prevailing ſymptoms, and in no inſtance did it appear to be deleterious. Two in three, at the loweſt computation, in every ſtage of pulmonary conſumption, have obtained temporary benefit from it; one in three in the firſt and ſecond, or in the catarrhal and tubercular ſtages, has been cured; and even in the laſt period of this diſeaſe, the exiſting ſymptoms have been greatly ameliorated. Much promiſing amendment of ſeveral weeks duration has, indeed, been produced, but in no inſtance has an ultimate cure been effected.

The

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* Vide Medical and Phyſical Journal, Vol. II. p. 33, 238.

† Vide Medical and Phyſical Journal, Vol. II. p. 314, 430.

The precautions ſuggeſted by Dr. Sherwen,* relative to the uſe of digitalis, are more honourable to his humanity than demonſtrative of the correctneſs of his experience. To adopt them would be to ſhackle its due adminiſtration with hurtful timidity.

The ſaturated tincture of digitalis has been taken, under my direction, by children of eight years of age, in doſes of five drops, gradually increaſed to fifteen, three times a day; and by adults, from ſixty to ſeventy years old, from ten drops, ſlowly augmented to thirty, at equally ſhort intervals, during three or four weeks ſucceſſively, without the leaſt detriment, or ſlighteſt cauſe for alarm.

If the practical rule be duly obſerved, of beginning with five drops of the tincture, one-quarter of a grain of the powder, one tea-ſpoonful of either the decoction or infuſion, for children; and ten drops of the tincture, one grain of the powder, and one table ſpoonful of either the decoction or infuſion, for adults, in both caſes repeated three times a day, at equal diſtances, gradually extending the doſe, if no diſagreement enſue, or as the exigency of curative efficiency may require, diminiſhing or wholly ſuſpending the medicine if either nauſea, vertigo, or irregularity of the pulſe ſupervene; the weakeſt conſtitution, and moſt morbidly irritable temperament, may be, in general, ſafely and adequately charged with its influence.

I am perſuaded the beneficial effects of digitalis are often prevented, and the worſt inconveniencies of its operation incurred, by either not commencing its employ in ſufficiently ſmall doſes, or in advancing them too rapidly. If its agency be abruptly or violently obtruded on the ſtomach, it will induce indirect debility on that organ, accompanied with a revolting nauſea to its ſubſequent adminiſtration; the effects of which will be ſpeedily propagated over the ſyſtem, and predominantly felt on the lungs.

It has occurred to me more than once, to witneſs and regret theſe pernicious conſequences from its undue exhibition.

Dr. Maclean deſerves well of ſcience and mankind, for his many excellent practical remarks on digitalis. His communication on that ſubject† diſplays ſuperior truth, perſpicuity, and intelligence; but this juſt tribute of approbation does not diſarm my oppoſition to what experience has convinced me is exceptionable in his opinions.

Reiterated obſervation fully authoriſes me to diſſent from Dr. Maclean

* Vide Medical and Phyſical Journal, Vol. II. p. 175.
† Vide Medical and Phyſical Journal, Vol. II. p. 113.

Maclean,* in his remark that nauſea rather promotes than impedes the ſalutary agency of digitalis.

The reverſe has uniformly appeared to me to be the fact; by its increaſing the prevailing general debility of the ſyſtem, the pulſe has been rendered ſmall, weak, and hard; the cough more urgent, with leſs thoracic ability to endure its attendant exertion; harraſſing laſſitude, more frequent and durable febrile exacerbations, and nocturnal ſweats, have alſo obviouſly riſen on the ruins of ſtrength, induced by the ſickening influence of digitalis. The caſes of the firſt and ſecond ſtages of phthiſis pulmonalis under my direction, in which it has failed to render permanent ſervice, have been almoſt without exception, thoſe in which ſickneſs became an early effect of its operation.

After this injurious occurrence, in vain have I in general ſought to obtain that firm, full, ſoft, and equal pulſe, which is a much leſs fallible harbinger of radical benefit from digitalis, than its mere retardation. With reduced frequency of pulſe, (when morbidly exceeding the natural ſtandard) are neceſſarily aſſociated proportionate fullneſs and ſoftneſs, conditions leſs ſeparable from the beneficial agency of digitalis than increaſed ſlowneſs.

I have had frequent occaſion to obſerve much amendment afforded by it, without ſenſibly retarding the pulſe; and in one tuberculous caſe, a ſpeedy and perfect cure was effected without perceptibly diminiſhing its celerity; it continued invariably at ninety ſtrokes in a minute; the only change induced, was from hard, weak, and ſmall, to ſoft, firm, and full; a difference eſſential to permanent recovery, in all ſtages and circumſtances of pulmonary conſumption.

It will be found on trial, that the aſſiduous employ of nutritious diet, conjoined with frequent and briſk friction over the region of the ſtomach, performed with a fleſh bruſh, will greatly fortify the ſyſtem, and contribute to obviate the diſtreſſing nauſea, (and its diſaſtrous conſequences) incident to the agency of digitalis. Were I to be aſked what concomitant rule in the uſe of digitalis, appeared to me the moſt important, my prompt reply would be, to nouriſh with ſmall quantities of aliment, conſiſting chiefly of animal food, repeated at ſhort diſtances, ſo as not to induce either oppreſſion or indigeſtion, and to ſupport the general ſtrength, without either moleſting or exhauſting it by inordinate or deſultory excitement, with a view at once to reſiſt a concentration of the influence of digitalis on the ſtomach, and to ſecond its ſalutarily ſtimulant operation on the ſyſtem.

My opinion of the modus operandi of digitalis, is founded on a principle of lymphatic circulation, that wholly rejects the pre-

vailing but gratuitous notion of the lymphatic vessels absorbing and propelling, by virtue of any independently active or contractile power, attributing the transmission of lymph entirely to the conjoint influence of arterial and muscular impulse; but this subject will be farther explained on another occasion.

If Dr. Maclean should not have hitherto been in the habit of allowing his consumptive patients, under the use of digitalis, the salutary excitement of moderately stimulant nourishment, he may with some confidence, in my experience of its utility, advantageously incorporate it with his code of other judicious regulations.

The tincture of digitalis, prepared from the recent leaves, as proposed by Dr Maclean, promises to be more efficaciously impregnated with the native virtues of the plant than that made from the dry. The soporific effect often produced by digitalis, and the striking analogy of its general operation to that of opium, hemlock, night-shade, hen-bane, &c. clearly evince its narcotic property, and suggest the probability, that this quality constitutes the chief ground of its medicinal efficiency. It is not precisely known, on what arrangement of elementary and constituent principles, the narcotic power of vegetable substances depends; but it is notorious, that it resides mostly in the volatile parts, and that the decomposing influence of light, and the process of exsiccation, greatly derange and dissipate those active materials.

The form of tincture is also, indisputably, equally efficacious with any other shape in which digitalis can be employed; and, in my observation, indeed, has proved more specifically active on the lungs, than either the powder, infusion, or decoction, which have all a greater or less tendency to operate more particularly on either the stomach, intestines, or kidnies.

I will attempt no other comment on the opinions and practice of Dr. Drake,* relative to digitalis, than that which a comparison of facts irresistably furnishes. With due deference to the talents of that practitioner, and also to his avowedly firm persuasion that he has thrice succeeded in curing the ultimate, or ulcerated stage of phthisis pulmonalis, by the agency of digitalis, I must assume the liberty of suspecting that the advanced progress of the tubercular, or second stage of that disease, has deceived him into an idea of its having been the last period; a mistake extremely incident to the best powers of discrimination.

My suspicion is far from being either captious or illiberal, it rests on the broad basis of his own assertion, that he has never exhibited

* Vide Medical and Physical Journal, vol. ii. p. 267. 417.

exhibited digitalis in the tubercular stage of pulmonary consumption; that it has proved curative under his direction in the ulcerated state of that malady, in three instances of five; though I have employed it in upwards of twenty apparently similar occasions, with the utmost perseverance, and occasional variation of form, without having rescued one patient, while seven tubercular cases (three of which were accompanied with very specious ulcerous circumstances) have been radically cured under my care, by its salutary influence; that, probably, the collective experience of the medical practice of Great Britain, with the solitary exception of that of Dr. Fowler, cannot afford an equal extent of success; and finally, that it is impossible to distinguish the nice shades by which the eve of the second and the dawn of the third stages are separated.

The expectorated fluid, generated by the morbid secretion obtaining on the mucous membrane investing the bronchial cavities, and occupied in the unbroken tuberculous structure, may be occasionally tinged with blood, evolve fetor, and in all respects assume an imposing resemblance to that which is afforded by the ulcerated surface. Neither does the general or hectic state of the system (though hypothetically imagined to be characteristically diversified by the equally gratuitous notion of the absorption of aërated matter) present any other difference than that which consists in an occasional variation in degree of violence, and on which no practical diagnosis can be justly founded. Nor is the duration of the disease an adequate datum for estimating its existing stage, the progress being necessarily various, in dissimilar temperaments, and under different circumstances; yet it may be safely admitted, as a less ambiguous criterion than that which is supplied by either the general or particular indication of the attendant symptoms.

If three months be allowed for the completion of each stage, nine months will comprise the whole period in which pulmonary consumption passes through every gradation, from its most incipient and slight form, to its most confirmed and inveterate advancement; and it is accordingly found, that digitalis but rarely renders more than temporary relief in this disease, when it is more than six months standing, and that its most curative agency is exerted in the interval from the second to the fourth month. It is obvious, that asthmatic and other chronic affections of the lungs, distinguishable by no definite mode of progress, or length of duration, (but in which digitalis also often operates very salutarily) ought not to be confounded with real phthisis pulmonalis, and opposed to this consideration.

Since, then, it is impossible positively to ascertain that pulmonary consumption is at the termination of the second, or actually

advanced

advanced into the third ſtage, how is it to be probably preſumed? Surely, neither by haſty conjecture, nor by inferences deduced from queſtionable premiſes; but rather by the analogous efficacy of ſimilar remedies acting in parallel circumſtances.

If it might be aſſumed, (what indeed inquiry would undoubtedly verify) that the aggregate experience of medical practitioners could adduce one thouſand well-authenticated caſes of ſtrongly marked tuberculous conſumption having been cured by digitalis, and (with the exception before noticed) not one of its having ſucceeded in what is ſtrictly denominated the laſt ſtage of that malady, is it being too ſceptical in refuſing aſſent to a comparatively very limited experience, which affirms the converſe of the greater evidence, alleging that it has cured three in five in the ulcerous, and has never been employed in the tuberculous ſtate of the diſeaſe?

Dr. Drake has great merit in having cured what I eſteem to be no more than the tuberculous, or ſecond ſtage of pulmonary conſumption; if, however, the ſequel of his experience ſhould prove that I have unjuſtly ſuſpected the accuracy of his diſcrimination, he ſhall receive my cordial recantation, and will be farther amply entitled to the laſting gratitude of mankind.

It has recently occurred to me, to witneſs the curative efficiency of digitalis ſignally manifeſted in two caſes, nearly ſimilarly circumſtanced, of apparent meſenteric obſtruction.

The one was a weakly conſtituted woman, about 25 years of age, in whom general debility, progreſſive emaciation, nocturnal perſpiration, tranſient pains in the abdomen and thorax, accompanied with hectic fever, had prevailed upwards of two months.

The other was a girl, aged about twelve, of a ſcrophulous habit, in whom the preceding ſymptoms, though in a leſs degree, added to thoſe of dyſpepſia and anorexia, had exiſted about ſix weeks. In both inſtances, a cure was accompliſhed under its uſe within one month.

Conjoined with a well-regulated diet, it promiſes to be eminently efficacious in atrophical affections, originating from deficient arterial and muſcular energy, inducing lymphatic obſtructions, vitiated aſſimilation, and an inadequate ſupply of alimentary principles to the ſyſtem.

Neither in chloroſis, epilepſy, nor in external ſcrofula, has, hitherto, under my obſervation, any evident amendment reſulted from its ſedulous employ.

I am, Gentlemen,
Your's, reſpectfully,
ROBERT KINGLAKE.

Briſtol, December 14, 1799.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

YOUR last Number contains an account of the exhibition of a remedy, which, of late, has been the cause of much disputation in the medical world;—I mean, the *digitalis*; an article of the materia medica, about which there has been a *strange* diversity of opinion. Some, with how much propriety I do not pretend to determine, deny its utility altogether; and with others, it has been the subject of much unmerited eulogy.

With respect to the former of these disputants, I can positively aver, that I have witnessed it to have the most benign and kindly influence over that disease, denominated hydrothorax. It will, as I conceive, be nugatory to take up time and room, which may be better occupied, in giving a relation of all these cases; it may be sufficient to say, that the remedy was employed under the direction and superintendance of Mr. Hopkins, of Harwich, a gentleman well known in the county of Essex; and whose medical talents require no panegyric from my pen. In hæmorrhagy, I am informed, its efficacy stands almost unparalleled.

With regard to the latter, men who are prejudiced in favour of any particular remedy, see, or imagine so, effects produced by it, of which others discern no trait. The learned and very ingenious author (Dr. Drake) of the paper before alluded to, attributes wonderful salutary effects to the digitalis, as administered *by him* in phthisis pulmonalis tuberculosa; he even goes so far as to say, that it may almost be considered as a specific. I do, with the utmost deference, bow down to the Doctor's superior ability; I know full well his accuracy and precision in marking the symptoms of disease, and his judgment in discerning the effects of remedies; but I cannot help observing, that I think him here too sanguine.

Some time ago, I was induced to give trial to this remedy in a case of tubercular consumption, about which there was no manner of doubt; I entertained hopes, not a little ardent, of its having beneficial effects; but was surprised to find, that it produced no one that seemed in the least to arrest the progress of the disease, or even to mitigate the sufferings of the patient: in fact, it tended rather to increase them; the failure of it I knew could not be attributed to the irregularity of the preparation, because it was agreeable to that which the doctor recommends. During my avocations at this hospital, many trials have been given it, and the results have fallen infinitely short

short of what was expected; in but a few instances could patients be said to receive even a palliation of symptoms. These trials were made under the direction of gentlemen, who used every effort to avail themselves of its utility. I could adduce many instances of the failure of this remedy in tubercular consumption; in fact, I have the authority of men eminent in their profession,—men who stand at the head of medical science, for declaring, that digitalis never yet has cured a person labouring under this complaint. It is most certainly true, that digitalis, when judiciously administered in the incipient stage of phthisis, will, like any other sedative, retard the progress of the disease; but who trusts to this alone? Is not every exciting cause removed? An abstinence from all stimuli; the vicissitudes of weather guarded against, &c.? If the patient should be snatched from the impending danger, how can it be said that digitalis has effected the cure? Seeing, then, that there must be an assemblage of remedies, the effects of all which are, perhaps, fortuitous, to restore the patient to his pristine vigour,—can it with propriety be adjudged to any one in particular?

The modus operandi of digitalis, is not at all difficult to be explained; its effect on the human body, is that of a *direct* sedative; like opium, it restrains the action of heart and arteries, through the medium of the stomach; i. e. by the harmony that subsists between those organs; consequently the blood is propelled with less energy to the pulmonic system. Inflammation, if it has begun, is removed; and thus the disease may for a time be suspended. Beyond this sedative effect, digitalis avails us nothing.

I am, Gentlemen,

Your's, &c.

JOHN BAILEY.

Saint Thomas's Hospital,
Dec. 16, 1799.

To the Editors of the Medical and Physical Journal.

Gentlemen,

EVERY man conversant in the practice of physic, and who reflects with due consideration on the importance of the subject, must perceive with pleasure the many benefits which are likely to result to the community in general, and to the medical profession in particular, through the medium of your excellent Miscellany. To the remote country practitioner, cut off from a knowledge of the more recent improvements and discoveries of

of the capital, it will prove an acquiſition of the higheſt importance; it not only conveys a valuable ſtock of information to all, but likewiſe ſerves to ſtimulate the indolent, and awaken a ſpirit of reſearch in the more learned part of the profeſſion. The truth of this obſervation has been already evinced in the numerous experiments inſtituted by different gentlemen in order to aſcertain with preciſion the medicinal powers of various active remedies. Among theſe, the Digitalis Purpurea, has deſervedly attracted a large ſhare of the public attention; and at this we are not to be ſurpriſed, when it is conſidered, that a belief began to prevail of its poſſeſſing peculiar ſpecific powers in the cure of phthiſis pulmonalis; a diſeaſe which had, hitherto, but too often baffled the ſkill of the ableſt phyſicians, from the days of Hippocrates to the preſent time, and which has proved particularly deſtructive to the inhabitants of this iſland. Happy, indeed, will it be for a large portion of the inhabitants of Europe, ſhould future experience and inquiry confirm the high encomiums with which it has been of late ſo much honoured. The favourable reports circulated of its anti-phthiſical effects, from various quarters of high reſpectability, induced me to give it a trial; and it is a duty incumbent on every profeſſional man, to add his little ſtock of information to the general maſs of knowledge, as well as to contribute his mite towards elucidating a queſtion, on the ſolution of which the lives and happineſs of many of his fellow creatures depend.

If the following caſe and obſervations be deemed worthy of inſertion in your valuable publication, they are much at your ſervice. The only merit it claims, is confined to accuracy, and the moſt religious adherence to truth. The pulſe was examined ſyſtematically, morning, afternoon, and night, except the two firſt days, under my own care, or that of Mr. Woodham, head-aſſiſtant, a gentleman of great diligence and ability. It was deemed neceſſary to be thus particular, from the extraordinary changes which invariably marked the daily ſtate of the pulſe, eſpecially after the patient came to be completely under the influence of the medicine, and from an anxious deſire of becoming acquainted with the exact properties of the digitalis.

It was exhibited regularly three times a day, at the hours of 8, A. M. 1 and 7, P. M. The periods choſen to examine the pulſe were, 10, A. M. 5 and 9. P. M. which, to prevent prolixity and repetitions, need not be again mentioned.

I remain, with great reſpect, GENTLEMEN,
Your very humble ſervant;
JAMES MAGENNIS, M. D.

Norman Croſs, Dec. 27, 1799.

The ſubject of the following caſe, Bertrand Stroed, a Dutch priſoner, is a young man of 27 years of age, thin viſage, long neck, high ſhoulders, and pale complexion: he was admitted into the hoſpital on the 29th of December, 1798, labouring under ſevere pneumonic affections, which, after ſome time terminated in a troubleſome diarrhœa; he was, however, diſcharged on the 21ſt of Feb. 1799, pretty well recovered, and continued in the priſon till the 9th of Auguſt following, when he was again received into the hoſpital. It ought to have been premiſed, that he had been affected with cough and pain of the ſternum, for two months previous to his arrival at this priſon; that he was very unwell for ſeveral weeks before the ſecond admiſſion, although he made no application, and that the cough continued more or leſs all the time. I found him much emaciated, with a very troubleſome, irritating cough; pain about the ſcrobiculus cordis; difficult and oppreſſed reſpiration, eſpecially when he attempted to lie on either ſide; expectoration profuſe; pulſe from 110 to 120; hard but not full; a dry, hot ſkin, and at no time ſubject to nightly perſpirations. He was treated with various remedies, chiefly on the antiphlogiſtic plan, till the 29th, without any change for the better, except the reduction of the pulſe to 100; but all the other ſymptoms were progreſſively worſe;—the expectoration had increaſed, being now, as in fact it had been for ſome time paſt, evidently purulent, with a ſmall circular, rouge-like, appearance on each cheek. His appetite, however, continued tolerable, diet compoſed principally of milk with a little animal food, and as the debility was extreme, he was allowed four glaſſes of wine daily, immediately on commencing the digitalis, which he did on this day, the 29th, in the following draught: ℞. Kalip^{t}. ℈j ſuc. limon. ℥ ſs. aq. puræ ℥j tinct. digit. g^{t}. x. ter in die ſumend. The pulſe at 10, A. M. 96, at 4, P. M. 88. The 30th, Tinct. g^{t}. xv. p. 100, 68. The 31ſt, p. 92, 98, 70. Sept. the 1ſt, Tinct. g^{t}. xxx. p. 90, 98, 70. The 2d, Tinct. g^{t}. xl. p. 95, 98, 60. The 3d, p. 80, 72, 64. The 4th, Tinct. g^{t}. l. p. 90, 78, 64, general ſymptoms in every reſpect the ſame. The 5th, p. 88, 64. The 6th, Tinct. g^{t}. lx. p. 80, 64, 52. The 7th, p. 84, 72, 60. The 8th, p. 88, 80, 64. The 9th, Tinct. g^{t}. lxx. p. 96, 84, 66. The 10th, 78, 60, 56. The 11th, p. 92, 84, 50. The 12th, p. 96. 72, 50; pulſe intermits; vertigo with nauſea, and vomited in the morning. The 13th, p. 8[illegible], 72, 46, intermiſſions continue, with vertigo and nauſea; vomited again in the morning; the firſt doſe omitted. The 14th, as the dizzineſs, nauſea, and other diſagreeable ſenſations ſtill continue, the doſe was reduced to Tinct. dig. g^{t}. xxx. in aq. menth. ℥ſs. p. 92, 74, 50. The 15th. nauſea, vertigo,

&c. removed, Tinct. g^t. XL. p. 104, 76, 42. The 16th, Tinct. g^t. XLV. p. 72, 72, 52, slight dizziness, the appetite good, body regular. The 17th, Tinct. g^t. L. p. 90, 68, 48. The 18th, Tinct. g^t. LV. p. 78, 60, 46. The 19th, Tinct. g^t. LX. p. 80, 72, 44. The 20th, Tinct. g^t. LXV. p. 90, 60, 38, expectoration the same, head free. The 21st, vomited the morning dose, p. 96, 60, 42. The 22d, again vomited, in consequence of which the other two doses were omitted. P. 92, 68, 44, intermitted sometimes every third, fifth, and seventh pulsation; and sometimes two pulsations were lost. The 23d, the dose as on the 20th. P. 60, 52, 34, intermitted during morning, but regular in the evening. The 24th, no alteration in the expectoration, p. 60, 48, 44. The 25th, p. 86, 84, 40. The 26th, p. 48, 90, 40, intermissions as on the 22d. The 27th, p. 72, 80. 44, irregular. The 28th, p. 48, 72, 36. The 29th, p. 60, 80, 40. The 30th, p. 60, 80, 40, small and scarcely perceptible. Oct. the 1st, p. 86, 50, 36, vomited morning and evening dose. The 2d, Tinct. g^t. L. p. 56, 66, 36, intermitted the whole day, but no nausea. The 3d, p. 52, 88, 38, very regular all the afternoon. The 4th, p. 50, 50, 38, intermitted, vomited the morning dose. The 5th, p. 60, 84, 40, again vomited morning dose. The 6th, p. 46, 80, 40, slight nausea with vertigo. The 7th, p. 60, 74, 40, vertigo continues. The 8th, p. 80, 50, 36, dizziness the same. The 9th, p. 68, 90, 38, expectoration visibly diminished. The 10th, p. 48, 80, 48, weak and irregular, but less dizzy than on the two preceding days. The 11th, p. 72, 60, 36. The 12th, p. 84, 90, vertigo gone, expectoration diminishing. The 13th, p. 60, 52, 38, full with intermissions. The 14th, p. 48, 100, 46. The 15th, p. 44, 71, 39. The 16th, p. 44, 72, 44, weak and irregular, expectoration much diminished. The 17th, p. 52, 80, 36. The 18th, p. 40, 72, 34, vomited the morning dose. The 19th, Tinct. g^t. XL. p 44, 50, 40, intermissions, vomited morning dose, in the evening regular and full. The 20th, p. 56, 62, 40, expectoration diminished to one half, cough much better, pain of the scrob. cord. greatly relieved. The 21st, p. 44, 94, 44, regular without nausea. The 22d, p. 45, regular and full; 60, irregular; 40, regular without dizziness. The 23d, p. 56, 100, 44, intermitted. The 24th, p. 44, 80, 40. The 25th, Tinct. g^t. L. p. 60, 120, 40, expectoration still farther diminished. The 26th, p. 48, 40, 40. The 27th, p. 80, 70, 38, expectoration about 7 oz. The 28th, p. 60, 88, 40. The 29th, p. 60, 88, 38. The 30th, p. 52, 60, 44, intermissions with vertigo and vomitings. The 31st, the tinct. reduced to g^t. XXX, p. 60, 52, 40. Nov. 1st, Tinct. g^t. XXXV, p. 64,

50,

50, 38, the expectoration under three ounces, cough gone except in the night time, pain entirely removed. The 2d, p. 52, 84, 40. The 3d, Tinct. g^t. XL, p. 84, 80, 42, complained of oppression on lying down. The 4th, p. 76, 64, 44. The 5th, p. 62, 42, respiration better. The 6th, p. 44, 100, 38. The 7th, p. 94, 90, 36. The 8th, p. 40, 80, 40, expectoration three spoonfuls only. The 9th, p. 68, 42, 38, an extremely debilitated pulse. The 10th, p. 48, 50, 42. The 11th, p. 52, 70, 46. The 12th, p. 48, 50, 46, weak with irregular intermissions. The 13th, Tinct. g^t. LV, p. 60, 52, 40, irregular but full. The 14th, p. 68, 70, 50, irregular all day, the cough again troublesome with dyspnœa; the cough previous to this was confined to a little on first lying down. The 15th, emp. canth. scorb. cord. p. 52, 64, 46, the breathing relieved. The 16th, p. 52, 64, 46, vomited the morning dose. The 17th, Tinct. g^t. XXX, tinct. op. camph. ʒj. p. 52, 60, 40, irregular cough, and dyspnœa troublesome. The 18th, p. 100, 60, 46, expectoration increased, but had no disagreeable fætor, and was free from purulency. The 19th, p. 54, 72, 38, cough better, expectoration diminished. The 20th, Tinct. g^t. XL. p. 60, small and irregular; 46, 38, full and regular. The 21st, p. 50, 40, 40. The 22d, Tinct. g^t. L. p. 48, 70, 38, very weak and small. The 23d, p. 44. 44, 40, intermit. complains of pain and weakness in the right arm. The 24th, p. 52, 56, 42, expectoration pure mucus, all appearance of purulence gone for some days. The 25th, p. 52, 98, 39. The 26th, p. 76, 86, 40, pain and weakness of the arm continue; nothing to be perceived; great oppression with dyspnœa in an horizontal posture. The 27th, p. 100, 52, 46, dyspnœa notwithstanding a blister, inter scap. yesterday. The 28th, p. 68, 64, 44, irregular in the morning, more steady in the evening, appetite on the decline. The 29th. p. 52, 62. 40. The 30th, p. 44, 64, 40. December 1st, p. 52, 73, 40. The 2d, p. 64, 100, 40. The 3d, p. at 4 P. M. 64 at 9, P. M. 32, weak but regular, and notwithstanding such surprising reduction, he is free from nausea, vertigo, and in other respects the same as yesterday. During the 4th, 5th, and 6th, the state of the pulse, owing to accident, omitted to be put down; but the digit. continued the same. The 7th, Tinct. g^t. LX, p. 42, 92, 38. The 8th, p. 60, 80, 48, expectoration and dyspnœa the same, pain and weakness of the arm removed. The 9th, Tinct. g^t. LXV, p. 57, 72, 40. The 10th, p. 52, 50, 40. The 11th, p. 52, 40, 36. The 12th, p. 92, 42, 40, slight nausea this morning. The 13th, p. 80, 82, 60, the expectoration again diminished to 3 oz. The 14th, p. 52, 50, 46, small and irregular in the morning, but the contrary in the evening, the

expectoration

expectoration two table ſpoonfuls and entirely free from purulency. The 15th, the weather about this time ſet in extremely ſevere, and he had in conſequence a freſh attack; the cough, dyſpnœa, and expectoration became more troubleſome and profuſe, which continued for ſeveral days; but all theſe bad ſymptoms have again diſappeared, and he now appears to advance with a firm pace towards a perfect cure, (the 26th,) although the cold continues unabated. He has been all along extremely ſuſceptible of being affected by changes in the atmoſphere, and unfortunately this has been too much the caſe during the whole year, eſpecially ſince the commencement of winter. I am inclined to impute the protraction of his cure to local circumſtances conſtantly operating, of which the principal were, long continued eaſterly winds, blowing over a deep marſhy country, to which the ſcite of the priſon is much expoſed, and the common effects of impriſonment on a mind already debilitated by a conſuming diſeaſe. The power of the medicine was moſt conſpicuous in diminiſhing the quantity, changing the quality, and removing the fœtor of the expectoration, as well as in leſſening the force of the vaſcular ſyſtem.

If we attentively conſider the hiſtory of all the caſes hitherto publiſhed by different authors, reſpecting the peculiar effects of the digitalis, nothing ſatisfactorily deciſive can be inferred, if we except the two caſes of Maris and Grimes, ſo accurately related by the ingenious Dr. Drake, of Hadleigh; but even in theſe, the ſtate of the pulſe was only attended to once a day, and, from the hiſtory already narrated, it muſt be manifeſt that the action of the medicine on the circulation, can only be accurately defined by a more frequent daily examination of the pulſe, &c.

The caſes enumerated by Dr. Fowler, and inſerted, like the former, in Dr. Beddoes's valuable volume of Contributions, are ſo vague and deſultory, that nothing more than very indefinite general reſults can be collected; as the mode of preparing the medicine, doſe, &c. as well as its particular defects on the head, ſtomach, and pulſe, are related very defectively. To thoſe recited by Dr. Bree, though more methodical than the preceding, I muſt object for nearly ſimilar reaſons; it would appear likewiſe that the ſubjects on whom he tried the experiments were, what in medical language is generally termed, loſt caſes; in fact, the Doctor ſays ſo himſelf, in very explicit words. Page 432, his obſervations are, "the remaining ſix caſes were too far advanced to have been capable of cure from any medicine." In the three caſes which he terms incipient, one of them only perſevered in taking the medicine for any length of time, and it proved parmanently ſucceſsful: Of the others, Harriſon took the

the powder nineteen days, and then discontinued. Underhill commenced with the tincture on the 8th July; but the quantity he took, or the time he persevered in its use, is not mentioned, only that he pursued it till anorexia and weakness made him lose all patience. It is to be observed, also, that in the greater number, the powder was administered, a form of exhibiting which renders it impossible to regulate the dose with that degree of precision so necessary to be attended to, when active remedies are to be employed. From those unsuccessful cases, then, to draw unfavourable conclusions respecting the antiphthisical effects of the digitalis, is most assuredly unjust, and what the premises will by no means warrant.

The remarks of Dr. Maclean, of Sudbury, on the common effects of full doses of the digitalis, were in general found perfectly just and conformable to the phænomena observed in Stroed's case; but the Doctor was evidently mistaken when he asserted, page 119, that those who expected to succeed in reducing the pulse to any considerable degree, without inducing vertigo, with vomitings, will be disappointed. The preceding case proves, that the pulse, after a certain space of time, was, in the evening, almost constantly at or under forty, frequently at 38, 36, 34, and once at 32, when neither the head nor stomach was affected; even at the extraordinary reduction of 32, the pulse was free from intermissions, and the patient, on being asked if he felt any particular uneasy sensations, replied, not in the least. What is still more remarkable, is, that the pulse was always found more regular, and generally fuller, when under 40, than above that and 50.

On the necessity of having a standard formula, in order to regulate general practice, I fully agree with Dr. Maclean, and the tincture used in the present case was made from his prescription:—it was found impossible to conform to that of Dr. Drake—one ounce of gross powder absorbed four ounces of proof spirit entirely; and I am persuaded his last improvement of one ounce to five will be found likewise inconvenient. A tincture prepared according to Dr. Maclean's method, may be administered with more freedom, and the dose better regulated.

The digitalis shewed no tendency whatever to act as a diuretic, nor were the intestines at all affected by it, the body having continued perfectly regular from the commencement to the end.

Upon the whole, then, after maturely considering the phœnomena attending the internal use of the digitalis in the present case, and comparing them with those observed by other gentlemen, we shall be warranted in drawing the following general conclusions.

First

Firſt, That this medicine, in the form of tincture, if carefully and gradually exhibited, may be ultimately given in large doſes, and continued for months with the moſt perfect ſafety to the patient.

Secondly, That after a certain length of time, when the ſyſtem is charged, and completely under its influence, it poſſeſſes a power of arreſting the motion of the heart and arteries in a ſurpriſing manner; but that, under ſuch influence, they are exquiſitely ſuſceptible of being rouſed into action on the ſlighteſt bodily exertion.

Thirdly, That the pulſe may be brought to a degree of readuction hitherto thought incompatible with the exiſtence of animal life, for any conſiderable time, without danger to, or even any material derangement of, the animal œconomy.

And *Laſtly*, That the criterion by which we are to be guided in regulating the increaſe, diminution, or total omiſſion of the medicine, depends on the phænomena ariſing from its action on the ſenſorium and ſtomach, and not on the quantum of reduction in the pulſe.

Mr. BROWN, *on the Neceſſity of eſtabliſhing an Hoſpital for the Treatment of Ulcerated Legs.*

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

AMONG the various charities which do honour to this city, there ſtill remains *one* wanting, which I am certain deſerves as much the attention of the humane as any yet eſtabliſhed; I mean, an hoſpital, infirmary, or diſpenſary, for the ſole reception of ulcerated legs. It is a very melancholy fact, that among the lower claſſes of the community, nearly in the proportion of one out of five, labour, and have, many years, under this ſevere affliction, which to them is a conſtant ſource of expence, and muſt ultimately terminate their exiſtence, by ſubjecting them to other diſorders more fatal and rapid in their progreſs. It will, perhaps, be urged as an argument againſt putting ſuch a benevolent ſcheme into execution, that our hoſpitals, as, St. Thomas's, Guy's, St. Bartholomew's, the London,

don, and all others, indeed, are open for the reception of ſuch objects, and therefore there is no abſolute neceſſity for eſtabliſhing one ſolely for this end. But when we pauſe for a moment, and reflect, that many labouring under this loathſome diſeaſe, do apply at theſe hoſpitals, and are denied admiſſion, and that many others are turned out incurable, who, under the ſkilful care of ſome ſurgeon, (who, perhaps, devotes more of his attention, and ſupplies the patient with thoſe neceſſaries which an hoſpital cannot, or does not furniſh,) receives a ſpeedy and effectual cure, ſurely no one but who is inſenſible to the agonies of the mind, and painful diſorders of the body, will refuſe his mite. From great and (with diffidence I affirm it,) very ſucceſsful practice in this branch of ſurgery, I can aſſert, that among the many caſes of ulcerated legs, which I have had under my care, ſince I have been in practice in this metropolis, I have never found any difficulty in effecting cures, even in the very worſt caſes, by attention to the particular circumſtances of the ſtate of the ulcers, by cleanlineſs, and occaſional reſt. It would require but little expence to put this charity on a footing with the moſt reſpectable in London. About £.2000 would erect a building ſufficiently large for the purpoſe, and a ſubſequent fund of about £.500 annually would ſupport it. The remedies required for healing bad legs, are very few and cheap, and ten thouſand perſons, yearly, might receive benefit from this charity. It only requires ſome ſpirited perſons to ſtep forward, and intereſt themſelves warmly in behalf of ſome hundred thouſands, ſorely afflicted with the diſorder, who would offer up their prayers for their benefactors; and from the ſtate of poverty they are now in, would be enabled to enjoy ſome of the few comforts of life. If any perſons are willing to aſſiſt the writer of this, in attaining an object ſo deſirable, and who is ready to ſubſcribe fifty pounds towards the fund, they will be ſhewn a plan, drawn up for the purpoſe, and requiring only the ſum before ſpecified to ſet it on foot.

I have the honour to be,

Your obliged,

CHARLES BROWN.

Hatton Garden, No. 25,
Nov. 5, 1799.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following Case of *Lusus Naturæ*, may, probably, be worthy a place in your valuable Journal, and not unacceptable to its numerous Readers.

In October last, I was engaged to attend the wife of a respectable tradesman, who expected to be confined about the end of November, or beginning of December. I heard nothing of her till two in the afternoon of the 12th instant, when I was informed she was unwell, and expected soon to need my assistance. At half past three I was desired to visit her; I went directly; and on hearing her voice, was convinced that the pain she was then suffering was an expelling one. I found the head and shoulders born; they were involved in the membranes, which I ruptured at the neck, and slipt over the head; the child at this time apparently lifeless. I determined to wait the natural expulsion of the breech, &c. rather than hasten the delivery. In about five minutes, I received a mass of a very uncommon nature; the placenta I distinctly felt; I withdrew the whole with the child, and wrapt it in a flannel which lay at hand. My attention was then directed to the mother, fearful of hæmorrhage from so sudden a separation of the placenta. I proceeded to ascertain the state of the uterus, and discovered that its fundus was to be felt by deep pressure only, on a line with the pubes. I was now satisfied with respect to the safety of my patient, and proceeded to inspect the child; its appearance was so extraordinary that I was desirous of taking a more minute examination than I possibly could in the chamber. I was permitted to take it away in the evening; and on examination, in the presence of Dr. Ainstie, Mr. Earl, and Mr. Heaviside, the appearances were as follow:

The head, perfect and natural; the thorax, very small, with a depression of the costæ on the right side; the arms perfect, but a stricture in the elbow joints, which prevented their full extension, (this stricture attracted my notice immediately on rupturing the membrances;) the spine shorter than usual, curved to the left side, so that the sacrum, &c. were in a horizontal position; the lower limbs, distorted and contracted; the left foot, perfect; the right, shapeless, with two toes only; but the most remarkable appearance was, the total want of abdominal muscle and integuments; the liver, stomach, and intestines, (the larger ones distended with meconium) exposed; no omentum; the peritonæum, emanating from the thorax and curvature of the spine, hung over them as an apron; having no attachment

ment at its inferior edge; the funis not more than six inches long; the placenta, natural, excepting a particular fatty appearance at its circular edge.*

The mother of this extraordinary production (which was of the male species,) does not recollect having met with any accident in the early part of pregnancy; she was suckling at the time she became pregnant, which accounts for the error in her reckoning. She quickened about the usual time, and was sensible of the motion of the child, till within two days of delivery. She has had several children, but her feelings in this case she describes as very different from any she before experienced.

I am, GENTLEMEN,

Your's, respectfully,

W. HUMBY.

St. Alban's Street, Jan. 15, 1800.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING transmitted for the third number of the first volume of your Journal, the appearances in a case of monstrosity, and having a short time since met with a second instance of monstrous production, I am induced to think, that a relation of it may not be uninteresting. The subject was a full grown female child, and was born dead. The imperfection of the cranial bones, was similar to the case before related, excepting that the os occipitis was nearly perfect, and its edge was not projected unnaturally outward. The integuments from the occipital bone did not dip down under its edge, but passed on the brainy excrescence, and were there soon insensibly lost. The brain had a fungous appearance, and seemed not to be deficient in quantity; it was not made what is called hemispherical, by a longitudinal division, but appeared a confused mass: neither dura nor pia mater apparently existed. The most curious part of this monstrosity was the existence of a dense semi-transparent membrane, which was attached to the left side of the summit of the excrescence, to the extent of about an inch. This membrane passed down to the left side of the face, and there formed several attachments; it adhered to the upper lip on its left side, producing a division in the lip, which exactly corresponded

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* The preparation of this uncommon subject may be seen in Mr. Heaviside's elaborate collection.

corresponded in appearance with what is termed the hare-lip; it also adhered to the left ala of the nose, and rendered the nostril on that side depressed and imperforate; it was also attached to the integuments on the cheek, just under the os malæ; which attachment, with the former, much distorted the left side of the face; its last adhesion was to the helix of the left ear, just above the lobule, which rendered the meatus anditorious externus imperforate, and produced a division of the ear, leaving the lobe separated from the pinna. Perhaps I have expressed too much, in asserting, that no dura mater apparently existed, as Nature *might* originally have intended this membrane to have formed it. The admission into the meatus anditorius externus, through the concha of the right ear, was so covered by integument, that the head of a probe could only be introduced; the entrance to the right nostril was in the same way impeded; and the eye-lids of both orbits were completely united, except in having a similar small perforation; and when a probe was passed through each perforation into the orbital concavity, it could be passed freely about it, and seemingly to its bottom; from which I should conclude, that no eyes existed.

I am, GENTLEMEN,

Your's, respectfully,

JOHN PULLEY.

St. Thomas's Hospital, Jan. 10, 1800.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the eighth Number of your valuable Miscellany, the author of "Observations on Zoonomia," is, by one of your correspondents, accused of misrepresentation. Having been much delighted with Dr. Darwin's Theory, I have paid considerable attention to the arguments of his controversialist; and, whatever his other deficiencies may be, I have found no reason to charge him with misconception. I therefore take the liberty of addressing a few words to your correspondent; and, I trust, your candour will consider the admission of the accusation, as a sufficient reason for admitting the defence.

The following passage is that which J. Y. adduces, as the instance of misstatement. "The embryon, according to Dr. Darwin, is a simple filament, without sensorial power, or the means

means of producing it." Dr. Darwin himself terms the filament *simple*, p. 496; and though, in the passages quoted by your correspondent, it is said to be "a living filament, *with certain capabilities of irritation, sensation, volition, and association*," the periphrasis seems to shew, that essential, rather than derived energy, is ascribed to the filament. This supposition is indeed inconsistent with the assertion, that life consists in the motions of sensorial power. But Dr. Darwin had a separate theory to support; he saw that a small quantity of a fluid liable to quick exhaustion, would be of little service to his embryon; and he therefore chose to ascribe to it permanent activity. He does not indeed say, that it has not the means of producing sensorial power; but Mr. Brown, afterwards, shews this to be the necessary result of the principles of Zoonomia. The conciseness which Mr. Brown has used in the section on sensorial power, I suppose, proceeded from the desire of avoiding the unpleasantness of repetition, as the subject is afterwards fully discussed by him in the section on generation.

As it is to the theory of generation the supposed misstatement relates, the objector should have thought it necessary to examine that part of the work, before advancing his charge. Had he consulted p. 435 of the Observations, he would have found, that Mr. Brown is not merely innocent of the alleged misrepresentation, but has himself quoted, and fully considered, the principal passage recommended to his notice by your correspondent. The passage can be understood only in two senses: It either states the existence of sensorial power in the primordial filament, or of energies of life, independent of sensorial power. The latter, however inconsistent with the principles of Zoonomia, seems to be the real sense in which it is used by Dr. Darwin; but Mr. Brown has considered it in both senses; and, it might have been thought, is thus doubly fortified against the charge of misrepresentation.

The following passage of the Observations, p. 434, will therefore, I trust, be considered by J. Y. as a sufficient answer. "The process of generation is said to consist in the secretion by the male of a living filament, and by the female of a nutritive fluid, which stimulates the filament to absorb certain particles, and thus to add to its bulk." "At the earliest period of its existence, the embryon, as secreted from the blood of the male, would seem to consist of a living filament, with certain capabilities of irritation, sensation, volition, and association." Zoon. p. 484. To say that the filament is living, and that it possesses these powers, is to say, that it possesses sensorial power, which is considered by Dr. Darwin as the source

of

of animation. But the ſmall quantity of ſenſorial-power, which we muſt ſuppoſe it to poſſeſs, will be exhauſted in a ſhort time, by the continual irritation of the particles around it; and the embryon will thus be deprived of life, almoſt as ſoon as it is ſeparated from the male.

It will, perhaps, be aſſerted, though the aſſertion cannot be reconciled with the diviſion on which Zoonomia is founded, that the four ſenſorial faculties are poſſeſſed by the filament, without reference to its ſenſorial power, and that it is thus eſſentially endued with life. It is not ſufficient, however, that the filament originally ſecreted, poſſeſs the four faculties of animation. The parts joined by accretion, muſt alſo poſſeſs them; for the original filament will be ſurrounded by theſe, long before the complete formation of the brain and ſpinal marrow. If, therefore, the whole frame be ſuſceptible of irritation, ſenſation, volition, and aſſociation, the brain and ſpinal marrow are wholly uſeleſs. Dr. Darwin will find it difficult to explain thoſe phœnomena, which he aſcribes to the abſence of irritability, or voluntarity; and death will be impoſſible."

S. N.

Oct. 9, 1799.

Mr. Chriſtie's Obſervations on Gun-ſhot Wounds.

[Continued from our laſt Number, p. 40.]

THE general confuſion which prevails during an action, will amply account for wounds being leſs regularly dreſſed, or operations leſs nicely performed, by the regimental practitioner in the field, than in the general hoſpitals. In ſhort, it can hardly be done, and is therefore ſeldom expected. I believe the duties of the regimental medical department have been, in general, as faithfully diſcharged, during this part of the campaign, as trying circumſtances, deſtitute of many reſources, could poſſibly admit of, and particularly in the action at the village of Oude-Caſpel, on the 19th of September; when the Guards, the 9th, 17th, 35th, and 40th, Engliſh regiments, along with the Ruſſians, maintained ſo obſtinately, ſo ſeverely, their diſputed ground; I heard it (though at a diſtance) reiterated by many a grateful tongue, the handſome, the heroic manner in which ſeveral of the regimental medical ſtaff diſcharged their ſoothing duty on the ſcene of action, aided by few means, and when all Nature ſeemed to be waging war with the healing art; even then lives were ſaved by judicious and timely benevolence,

volence. I have taken the liberty of mentioning this, because a spirit of bravery, wherever it appears necessarily adorned, as it must be, by many virtues, ought not to be passed over unnoticed.

In the application of bandages, along with compresses variously modified as it can be, the roller will be found to answer for any part of the body, where the wound is fleshy. In the limbs, where there is fracture, the eighteen or twelve-tailed bandage ought invariably to be used; and as the application of some emollient poultice becomes necessary to soothe the inflammatory action, which soon commences after every wound, this sort of bandage is much more handy than any other, and ought perhaps to be more frequently used than it is at present. Of late it has been very customary to place fractured limbs in an easy position on a pillow, covering them over merely by the fracture cradle; the cure is thus rendered comfortable; but it is plain, cannot be adopted in moving armies, or on shipboard.

For inflamed parts we meet with two kinds of poultice, opposite in their nature, recommended by writers, namely, the saturnine and emollient. The preparations of lead in poultice, as well as in wash, for the repulsion of inflammation, are much in use in Scotland, chiefly from its being recommended by a deservedly eminent and respected writer of that country. It requires, however, a nice care and considerable experience in the proper use of this sort of poultice. When the tension is great, the inflammation running high, and advancing rapidly, this is very apt to do mischief; while, on the other hand, the emollient poultices always soothe, and also, by their relaxing quality, often repel, even when applied with a view of hastening suppuration. It is after proper evacuations in the incipient stage of inflammation, and in the more indolent kinds, that I have found the applications of lead useful in effecting resolution. In gun-shot wounds it is probable they ought never to be had recourse to, for they will certainly tend to increase tension. The common bread and milk poultice with oil, and the linseed poultice, are found to answer every purpose. A very convenient one, when those cannot be had, as will frequently happen to the military practitioner, is made from a maceration of oatmeal in water, which takes up the glutinous and finer parts, leaving behind the grosser particles. The infusion is to be boiled to a proper consistence, and applied with or without oil. This method I had from a surgeon in the navy, where this kind of poultice, I understand, is very common and perfectly convenient.

In foul and sloughing sores, the fermenting poultice, as one made of yeast and meal, will be found preferable. In those kinds

kinds of sores, too, the carrot and turnip poultice have been much recommended; and it is said they all do good by the fixed air (carbonic acid gas) which they contain; with the same view, no doubt, has the charcoal poultice been used.

With respect to the extraction of balls, and other foreign matter, it is now, I believe, a rule not to attempt it, unless when readily within our reach, or placed in a situation that gives intolerable irritation; or where life might be endangered by its remaining. When out of reach, the ball will easily come out by the suppurative process which follows; and the many instances on record of balls remaining for life, forming for themselves an harmless bed, or working themselves out to other parts of the body, are numerous, and need not therefore be farther noticed here.

In gun-shot wounds it rarely fails that a considerable degree of febrile action commences, and I know no instance wherein the free use of the lancet affords greater relief; though the intestines are also to be kept open, purging, for obvious reasons, cannot well be fully employed. Opiates, in full doses, must also occasionally be had recourse to.

Of the easiest and most effectual method of preventing fistulous sores (which we might at first suppose frequently, but which in fact are seldom found) following those wounds, I have not yet had sufficient opportunities to determine.

Having thus, Gentlemen, completed my design, in giving you my introductory paper on gun-shot accidents, I will hardly think of forming an apology for the hasty and inaccurate manner in which it has been sent you. The duties of the field, admit of neither system nor elegance;—utility has been my constant aim;—how far in my papers I may be likely to succeed, it is for you to judge; but my labours in this service have been occasionally repaid by gratitude, a recompence I am proud to acknowledge, and which shall never be effaced.

To the Editors of the Medical and Physical Journal.

Gentlemen,

In the observations on gun-shot wounds, which I transmitted from Holland, and which you did me the honour of inserting in your Journal; I noticed the serpentine course which a wound from musket shot so frequently assumes; I mentioned this not merely as a matter of curiosity, but to shew, that

that uſeful practical facts would ariſe from the remark. Having lately paid ſome attention to a variety of caſes, I find, that in almoſt every gun-ſhot wound, the courſe of the ball had been more or leſs ſerpentine; for a body moving obliquely, has its courſe inſtantly altered, on *touching* a denſer medium; as may be ſhown from the riſing and falling of cannon or ſmall-ſhot, when fired along the ſurface of the ſea. Now, when we conſider the ſkin, muſcles, blood veſſels, membranes, and bone, as ſo many different media, (and from their difference in denſity, they in fact are ſo) we ſhall, perhaps, ſcarcely find one gun-ſhot wound whoſe courſe can be ſaid to be truly ſtraight. The ball meeting with different media, variouſly placed, its courſe will be neceſſarily varied.

In my paper, I was anxious to allege, that the velocity and turning courſe by which balls enter the cavities of the body, might tend to prevent miſchief, by their thus excluding the external air. I am perfectly aware, how many profeſſional men and teachers, celebrated too for acuteneſs of diſcernment, have ſcoffed at this obſervation; but with all deference to opinions, I am yet ſatisfied, that the acceſs of the external air, is, in many inſtances, ſufficient to account for the dreadful conſequences that ſo frequently enſue its entrance into ſacs naturally ſhut. Mr. John Bell, whoſe eminence as a ſurgeon is acknowledged, whoſe acuteneſs is well known, and whoſe talent for inſtruction I have often admired, doubts that the external air applied to ſhut cavities, ever produces injurious conſequences. " I do affirm," ſays he,* " that it remains to be proved, that this fluid, which ſeems ſo bland and pleaſant to all our ſenſes, and to the *outward ſurface*, is yet a horrible ſtimulus, when admitted into ſhut cavities." To this remark, I would beg to reply, that an ounce of Port wine thrown into the abdomen or ſcrotum, will likely excite inflammation in thoſe parts, while a bottle of the ſame fluid taken into the ſtomach, will only produce a pleaſant emotion. Mr. Bell inſtances too the caſes of hernia, and other protruſions of inteſtine not followed by inflammation, as a proof of the mildneſs of air. It will hardly be denied, however, that the peritoneo-inteſtinal inflammation, which ſometimes ſucceeds after the operation for hernia, is moſt probably aſcribable to this expoſure; from analogy we may be allowed to ſuppoſe, that much will depend on the length of time of expoſure, for we know that a ſtimulating injection thrown into the cavity of the tunica vaginalis teſtis, will ſometimes fail in bringing on inflammation from the fluid

* Diſcourſes on Wounds.

fluid, not being applied for a sufficient length of time. The instance which Mr. Bell adduces to corroborate the correctness of his doctrine, that the air effused in emphysema does not produce inflammation, I think, is an argument not at all admissable; for it must be recollected, that emphysema is occasioned almost only by a wound which penetrates the pleura and substance of the lung, without an external opening, arising from a fractured rib: now, the air which escapes into the cellular substance must, in this case, issue from a small opening only, previous to which it must have undergone the action of the lung, and thus be deprived of its chief stimulating principle, namely, the oxygen.

A celebrated professor,* whose observations are no less remarkable for their ingenuity than justice, long since taught, that a radical cure for hydrocele might be rationally attempted, by throwing air into the cavity of the tunica vaginalis testis, after the evacuation of the water; and there is little doubt but this idea suggested the operation which, I believe, is now generally used for this disease, namely, the stimulating injection of wine or other fluids.

Of the proximate cause of inflammation generally, but particularly that following the puncture of shut cavities and their contents, there appears something difficult to be explained. A prick with a bayonet or stiletto, is very frequently followed by fatal consequences, while an alarming protrusion of the bowels, occasioned by the cut of a sword, shall be unattended with any bad symptom.

A regiment to which I was attached in Flanders in 1794, by mistake in a dark night, while marching, had got close upon the French posts; in retiring, the prancing of some horses in the rear, occasioned a confusion, which was communicated to the whole corps with the irresistible rapidity of a torrent. The road was narrow, with a ditch on each side. One man had the humerus luxated by a fall; several were bruised by being trod upon; one man ran himself against a bayonet, which entered a little way into the left side, between the false ribs and spine of the ilium; a trifling hæmorrhage followed; a compress and bandage were applied over the wound, and he was largely blooded next day, with a view of preventing, as much as possible, any bad consequence; two days afterwards, however, he was attacked with symptoms of peritoneal inflammation. The regiment was then constantly moving, without any conve-

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* Monro.

niences; he was taken to a general hospital, where, in spite of bleeding and other means, he soon died.

A soldier of the same corps, who had been bred a lawyer, was reduced from being a serjeant, to serve in the ranks as a private, when quartered at Ealing in Hampshire, in 1796; he was determined to take the *law* in his own hands, for he attempted to stab himself with his pen knife; there were two small cuts in the abdomen, above the umbilicus, through which the omentum could be seen; it did not appear, however, to be divided. The wounds were closed, and kept so by sticking plaister; and, by way of preventative, he was largely bled more than once; no violent symptoms ever occurred, and he perfectly recovered.

A soldier in the same regiment, at Columbo, in the island of Ceylon, in 1797, had been carelessly cleaning his firelock, with the bayonet fixed, and placed over the foot of his bed. One of his comrades ran himself against it, entering somewhere below the umbilicus; he thought so little of the accident that he would hardly be prevailed upon to report to the attending mate; who, in his turn, declared it was trifling; and having put some superficial dressing over the wound, said, nothing bad would follow. In two days afterwards, however, the man began to be attacked with symptoms of peritoneo-intestinal inflammation, which destroyed him in four-and-twenty hours. Those cases occured in healthy men, in whom the abdomen was completely filled with the viscera; there was, therefore, no possibility of the external air getting in to produce any harm. The case in which there was no division of parts within the parietes of the abdomen, recovered; the other two, in which there was a puncture in some part of the viscera, were followed by death. In the whitloe, the peculiar severity of the inflammation arises from its being seated in membraneous parts, and confined by unyielding substances. The old hypothesis of an error loci, or a globule of blood having got into a vessel, unequal to transmit it, and this producing an effort of the vis conservatrix naturæ,* appears

* This was part of the Boerhaavian system, in inflammation arising without any evident external cause. This doctrine also taught a lentor of the fluids, or part of them, becoming præternaturally dense. One objection to this hypothesis has been, that the blood is supposed to be thinner in inflammation than in health; and as the buffy coat on the surface of the crassamentum is generally allowed to indicate the presence of inflammation, it has been received, that this appearance is produced merely by the red globules separating themselves from the coagulable lymph, which is thus shewn on the surface in its natural colour, but on account of its diseased thinness it is

appears to me, not more exceptionable than other hypotheses; for, in whitloe, it will hardly be denied, that the disordered action had arisen from a cause seated in a minute point, although its consequences might spread over the whole hand. Again, the practice among some army surgeons (whom we may well suppose are oftener guided by experience than reasoning,) of scarifying deep-seated gun-shot wounds in fleshy parts; giving the blood vent, as it is called, and allowing *room* for the parts to swell, seems to favour this opinion, namely, that in those bayonet wounds of the abdomen, the mischief happens from membranous parts being principally concerned, which do not admit of sufficient yielding, and the consequent effort of Nature brings on general peritoneal inflammation. Thus, I imagine, it has happened, that a protruded portion of sound intestine has been returned into the abdomen without any bad consequence; and yet, had the slightest puncture been made on that portion, it would, probably, have laid the foundation of a fatal peritoneo-intestinal inflammation. In inflammation of the eye, when I thought I *frequently* gave relief by dividing a turgid branch or two of a vessel on the albuginea, I must, at the same time acknowledge, that *sometimes* the practice appeared to do harm; for, in a day or two afterwards, a vast number of smaller vessels, hitherto invisible, would shew themselves running out from the place that had been divided; now, were those blood vessels confined to a substance before, as unyielding as the sclerotica is behind them, I make no doubt that an inflammation of the most violent kind would have ensued. But how miserably, alas! do we often fail when attempting to elucidate the operations of Nature! how frequently she eludes us when trying to subjugate her under rude mechanical laws! To mark accurately, *effect*, I believe, will ever tend more to the improvement of the healing art, than by bewildering the imagination in the endless mazes of *cause*. Why is it, that a bruise on the heel shall, in one person, bring on a fatal tetanus; while another, of a similar habit, and in the same climate, shall have his leg compoundly broken, without any alarming phænomenon?

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is incapable of suspending the red globules as in health. Does not the greater contraction of the crassamentum in inflammatory diseases, and the cupped appearance of its surface, lead us to imagine that the red globules may have acquired a truly præternatural density? It will, I hope, not be impertinent here to observe, that inflammation may, and does, sometimes exist without the blood shewing a buff-coloured appearance, especially in the first drawing; and again, blood sometimes shews this coat without there being any reason for supposing inflammation present.

 I think

I think that wounds of the chest, at least those where one lung only is concerned, are much less apt to be followed by fatal consequences than penetrating wounds in the abdomen. It cannot certainly be denied, that the lungs are less important to life than any of the abdominal viscera; the use of one lung may, with little inconvenience, be temporarily dispensed with; but, besides this, the yielding substance of the lung admits the inflammation spreading, and thus *humouring* as it were, the vis conservatrix naturæ: to this add, when a fluid is secreted or formed during thoracic inflammation, it will generally meet with a readier exit here than it could possibly find in the abdomen. In those wounds of the chest where the external air had entered, the lung must, of necessity, become collapsed; if the lung itself be wounded, the collapse will be attended also with such a contraction of the wound, as will be very favourable for its union; hence, what appears to be one of the most dreadful consequences of a wounded lung, becomes, in fact, a guidance to recovery. The difficulty of breathing in those wounds becomes, indeed, truly alarming, for the lung, in its collapsed state, similar to the fœtal lung, is capable of circulating but a comparatively small proportion of blood; hence, from this cause, as well as the extensive inflammation which will generally be found to follow this accident, the use of the lancet becomes doubly indicated.

Here, I beg to conclude these observations on wounds of the chest, by the case of Doogen, of the 27th regiment, whom I stated in my paper from Schagen to have been wounded the 27th of August last, and which appeared in the number of your Journal for December; he lately joined the regiment in perfect health, but on account of the want of a proper use of his arm, he is about to be recommended for Chelsea. On examining his case more particularly than I could the day he was wounded, I find the ball had entered immediately before the right axilla, between the second and third ribs. The wound has been quite healed these two months; he cannot extend his arm fully nor easily on account of the contraction of the divided pectoral muscles. After the accident, he says, he continued to expectorate, more or less, of a bloody froth, for a fortnight; two pieces of bone had exfoliated from the injured rib. Occasionally, he says, he still expectorates a little of a jelly-like matter streaked with blood, without pain or any considerable exertion. Soon after the accident, he had been attacked with severe symptoms of pneumonia, suffered violent pain of his breast, frequent teazing cough, and very great difficulty of breathing, and by his own account was blooded largely twelve times in the course of ten or eleven days. At present, his appearance is healthy,

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and even florid; his pulse about 86, abundantly full and regular; he cannot lie with ease on the left side; when in that position, he has a sense of weight, and cutting, as he terms it; neither does he lie with ease on his back, but is free from all inconvenience when lying on the affected side. He says, there was a crackling sort of swelling, around the wound, which appeared some time after the accident; the ball still remains in. Here is a case, where a ball lodged certainly within the chest, and apparently in the very substance of the lung, followed by extensive pneumonic symptoms, and succeeded by complete recovery. Its permanence, however, can hardly be trusted; for, should Nature not attempt a process to move it outwards, it will possibly lay the foundation for pulmonary consumption, on some slight exciting cause. In this, as well as several similar cases, which I have had permission to see at the Great Military Hospital here, under the direction of John Whitlocke, Esq. I have no doubt but the external air had insinuated itself through the wound, had occasioned collapse of the lung, and inflammation of the pleura. In Doogen's case, the difficulty of breathing, which was evident immediately after the shot, seems clearly to have been occasioned by the collapse of the lungs; the hæmorrhage, which was poured out in abundance from the wound, and by the mouth,* had relieved *this* in some measure, until the inflammation of the pleura had again required blood-letting. Lastly, the wound filling up, and gradually excluding the external air, the absorbents taking up what had entered, the lung gradually resumed its function. That absorbents and arteries have, indeed, the power of taking up or depositing air in a disengaged state, as well as other fluids, is rendered sufficiently probable from cases of tympany, and from the bags of air found in the structure of several vegetables, particularly in the seed-weed, kali, the air in which must certainly be deposited by vessels, which again will have a corresponding set of absorbents to regulate the quantity in the bag.† The preceding observations will tend to shew how emphysema so seldom happens after gun-shot wounds of the chest. This diffusion

* When I stated this case, I mentioned there was no hæmorrhage by the mouth, the little time I was with him, arising no doubt from the state of an approaching syncope in which I found him; for, on minute examination, I found blood had been thrown up before I saw him.

† In those hysterical flatulencies which are so frequently astonishing, and sometimes so alarming, in weakly women, do the eructations of air arise merely from the nature of the food taken? from a vitiated or diminished state of the gastric liquors? or, can we suppose air secreted by the vessels opening into the intestinal canal? Most probably there is a combination of the whole.

diffuſion of air, it is evident, can only well happen, as beforementioned, where the pleura and ſubſtance of the lungs are penetrated *without* an external opening; happening, of courſe, moſt frequently from a ſimple fracture of a rib, or at leaſt where the fracture is rendered compound by an internal laceration, by a ſplinter puſhed inwards directly, or elſe by the play of the lung by time abrading the pleura.

I formerly obſerved, that after a ſhot where the ball remains lodged, Nature ſeems diſpoſed to accommodate the foreign body; a ſort of ſac is formed for it, and it may remain harmleſs for life, even in the deeper-ſeated and perhaps more important parts. Although this does ſometimes happen, yet it more frequently appears, that after the conſtitution has remained for ſome time peaceable and quiet, and ſeemingly on good terms with her foreign viſitor, ſhe ſhews anxiety, ſigns of uneaſineſs; ſhe awakens, as it were, to a ſenſe of her duty; hence, balls find their way to the ſurface, ſometimes indeed by their gravity, but more commonly by an abſorbing proceſs, formed for the purpoſe of conducting them ſafely out of her dominion. We therefore find ſuch foreign bodies taken out near the ſurface, where, ſome time before, no trace of them could be found. In caſes of abſceſs and ſolid tumours too, we are told, Nature always ſhews a diſpoſition to bring the offending body to the ſkin, although, perhaps, there may be greater reſiſtance on this quarter to encounter. It is ſaid, ſhe cautiouſly avoids abſorbing and giving way on that ſide where eſſential parts reſide; a proceſs in itſelf moſt beautiful, and well calculated to call forth our admiration towards a ſupreme, pervading, adminiſtering Being, whoſe power, alone, would appear to us capable of directing the varied functions of animated Nature, amid ſuch nicety, and with ſuch ſurpriſing order! Mundi Anima Deus eſt.

Deal, January, 1800.

To the Editors of the Medical and Phyſical Journal.

Gentlemen,

In the Medical and Phyſical Journal for November laſt, is inſerted a very ingenious Eſſay, on the Digitalis Purpurea, from the pen of Dr. Drake. This Eſſay ſeems to have originated from ſome haſty remarks introduced by me to public notice, through the ſame channel, in Auguſt laſt. A principal motive with

with me, in bringing forward theſe obſervations, was to draw the attention of the medical world more immediately to this highly important ſubject, and to ſtimulate others to its farther proſecution; more eſpecially as I ſaw, with infinite concern, men holding forth expectations from it in the cure of conſumption, which I was confident, from my own experience, would never be realized. But while I derive no ſmall degree of ſatisfaction from ſeeing this part of my object in a fair train of being fully accompliſhed, I cannot be ſuppoſed to view with indifference an attempt to overturn, by general aſſertion, without argument or proof, what has been laid down as facts by me; and certain opinions attributed to me, which it never entered my mind to advance, much leſs to ſupport.

This Eſſay, therefore, demands ſome notice from me; and it is incumbent upon me to prove, that what I have advanced as facts, are ſo in reality; leſt I ſhould incur the charge of deceiving, while profeſſing to inſtruct thoſe who are yet to learn the general properties of the Fox-glove. Neceſſary, however, as this may, in every point of view, be, the publication of ſome obſervations I have lately drawn out, muſt unavoidably be delayed ſome time longer. They have been extended to a length that precludes their inſertion in your valuable Journal, for which they were intended, ſhould they be deemed worthy of a place in it.

You will therefore have the goodneſs to announce my intention of publiſhing, ſome time in the Spring, "An Eſſay on the general Properties of the Fox-glove; in which, the extent of its virtues in conſumption, and various other diſeaſes; its doſes, mode of action, preparation, and exhibition, are pointed out; together with an analyſis and refutation of Dr. Darwin's Theory, which ſuppoſes hectic fever to be the conſequence of the abſorption of aerated, or oxygenated, matter or pus; to which are ſubjoined, three caſes of inſanity ſucceſsfully treated by it."

The facts alluded to above, regard chiefly the growth and quality of the plant of my own garden, and the ſtrength of the tinctures of which I have given formulæ.

I can aſſure Dr. Drake, he is completely deceived in what he has ventured with ſo much confidence to aſſert, reſpecting the ſituation of my houſe, the ſoil of my garden, and the powers of the plant reared in it. If the ſituation of my houſe be "certainly low and damp," as the Doctor has affirmed, it has hitherto eluded my own and my family's obſervation. The fox-glove has for ſome years flouriſhed with the greateſt luxuriance in my garden. In ſome places the habitudes of the plant have been moſt attentively conſulted, and gratified, by means of an artificial ſoil and favourable expoſure; in others, however, it

 thrives

thrives among many other ornamental flowers, where the ſoil is naturally light, dry, and ſandy, with little care in the culture; and I have aſcertained, beyond the poſſibility of doubt, by comparative experiments made, varied, and multiplied, in numberleſs inſtances, that the ſtrength and virtues of the leaf thus reared, are not inferior to thoſe of the natural growth. I can, moreover, venture to aſſure thoſe who may wiſh to have the plant within their immediate reach, which gives the moſt decided advantages, that they will find no difficulty in its cultivation.

With regard to the tinctures of which I have given formulæ, I can adduce the teſtimony of almoſt every medical practitioner with whom I am in conſtant habits of acting, in proof of what I have advanced on a former occaſion. I have never been able, except in one inſtance, to exceed the quantity of 90 drops in a day; and I generally found from 60 to 75 drops fully ſufficient to affect powerfully the ſtrongeſt conſtitutions. In the exception mentioned, three draughts with 32 drops of the tincture of fox-glove, and 15 of laudanum in each, were taken in one day, and a fourth on the following morning; but the whole frame was ſo much under its influence, that, although the medicine was diſcontinued for a day prior to my viſit, I was ſeriouſly alarmed for the ſafety of my patient. The ſame perſon is now unable to continue, for any length of time, 60 drops in a day. When I perceive that Dr. Drake has exhibited 120 and 100* drops in twenty-four hours, of the tincture, which he calls ſtronger than mine, I cannot but expreſs my ſurpriſe at his aſſertion. It may be proper however to obſerve, that, although the colour of the tincture of the dried leaves, made according to the directions given by me, be dark, Dr. Darwin's, when firſt made, is darker, and, when immediately evaporated, while warm, leaves a greater quantity of reſiduum. But, when removed to the cool temperature of the apothecary's ſhelf, it depoſits a conſiderable portion of ſediment, and conſequently becomes proportionably weaker; and, I have reaſon to believe, does not ultimately retain ſo much of the active parts of the leaf in ſolution as that which is digeſted for a week with only half the quantity. Even this laſt depoſits ſome ſediment. Hence the grounds on which the proportions I ventured to ſubmit to the conſideration of the learned College were founded.

On the ſolid baſis of experiment too, I have aſcertained that every effect which the tincture is capable of producing, may be equally expected from the powder alſo; and, as I have already obſerved,

* Medical and Phyſical Journal, Vol. II. p. 267, et ſeq.

obſerved, the only advantage the former has over the latter is, that the doſe can with more facility be regulated. Yet, although the tincture was the only preparation uſed by Dr. D. in every caſe he has as yet brought before the public, (and we are unavoidably compelled to infer that he has publiſhed the full reſult of his experience to the date of his laſt communication) he has affirmed,* "that the wiſhed for effect in conſumption can ſeldom be produced by the powder." I ſuſpect he has himſelf, before this time, diſcovered, "that the wiſhed for effect" will ſeldom be produced, "even by the tincture, in genuine hereditary ſcrophulous conſumption," although he has with confidence affirmed, that it would, "in general, cure" this hitherto almoſt uniformly fatal diſeaſe. By giving this a place in your next Number, you will much oblige,

Your obedient ſervant,

L. MACLEAN.

N. B. I beg, in this place, to acknowledge my obligations to Dr. Moſſman, for his very candid and liberal interpretation of ſome hints I took the liberty of ſuggeſting for his conſideration in your Journal, Vol. II. p. 177.

General Remarks on Aliments produced by the different Claſſes of the Animal Kingdom, and their Influence on the Human Body; *by* J. J. VIREY, *&c.*

[Continued from our laſt Number, pp. 65—72.]

THERE are few perſons unacquainted with the diſagreeable conſequences reſulting from the uſe of fiſh. This food is the cauſe of many cutaneous diſeaſes, ſuch as leproſy, itch, malignant ulcers, ſcurvy, and even dangerous diarrhœas. Mammiferous animals that feed on fiſh have diſagreeable taſte; their fat is rancid, and their milk has a fetid ſmell. Several phyſicians have attributed certain endemic maladies to this aliment. BOATE aſcribes the leproſy which afflicts the inhabitants of Ireland, who feed on fiſh, to this cauſe alone. CLEYER informs us, that ſalt fiſh occaſion elephantiaſis in the iſles of Sonda; and PROSPER ALPINUS aſſerts, that the leproſy of the Egyptians proceeds from fiſh. The liver, inteſtines, and ſkin of theſe

* Medical and Phyſical Journal, Vol. II. p. 267, et ſeq.

animals are often venemous. It is remarkable, that this food extends its action principally to the skin, which has a strong sympathy with the intestinal canal; and that the latter suffers dreadfully by the introduction of poison. The tetraodons, the diodons, and several other species, are the most venomous of the finny tribe. But I think that they are only so in consequence of their aliment, which is composed of different zoophytes, as SONNERECK, FOSTER, and OSBECK have observed. The poison which some are supposed to possess in their prickly parts, as the *Trachinus draco*, LINN. the thornback, &c. does not actually exist. If the wounds occasioned by these prickles, exhibit violent symptoms of inflammation, it is in consequence of the laceration effected by these prickly parts, that are provided with small crotchets. The Galvanic shock of cramp-fish, tetraodons, and others of an electric nature, are not dangerous, except to their prey.

Whatever proportion of jelly fish may contain, they are not the most nutritive of animals. The taste of their flesh, like that of every other species of animal food, is less agreeable in the spawning season, as it then emits a strong scent. Fish of passage, as well as those which live in muddy ponds, afford the most nutritive and delicious food; but others that move in mire, and whose respiration is more interrupted, have soft and flabby flesh of a muddy taste.

Let us now leave the great division of animals, that have vertebræ and red blood, and descend to the inferior classes, which are by far the most numerous, but less beneficial to mankind. It appears that the utility of animals to man is in an inverse ratio of their numbers, and this is one of the proofs that every thing was not created for man alone, as has been erroneously imagined.

We here meet with another system of organization; and the nutritive substance presents a new order of composition. The first class possess tough, glutinous juices, which are almost indigestible, and afford little nourishment. These juices adhere to the tender fibres; they are a sort of jelly, which is easily decomposed by a slow heat, and resolved into a tasteless liquor that affords no aliment. In this state, it is a viscous, oily matter; but in the former, the substances are acrid and even corrosive: they exert their stimulating energy on the whole gastric systems, nay, frequently on the organs of generation.

Mollusques, whether naked or testaceous, afford in general an indigestible and slightly nourishing aliment, which is possessed of a certain mild cathartic, and sometimes aphrodisiacal property. They often have an insipid and disgusting taste, which rises on the stomach, such as the *aplysie*, which poisons the

2 flesh

flesh of those fish that feed on it, and the *Mytilus lithophagus*, LINN. that yields a phosphoric and rather acrid liquor. The flesh of testaceous animals is not always used without danger, particularly at certain seasons of the year. This poisonous property is attributed to small sea-nettles, *Medusæ*, LINN. and if acids act as an antidote against it, I have reason to believe, from a variety of observations, that acrid, stimulant, and aromatic substances increase its deleterious activity. Several *mollusques gymnodermes* afford an ardent liquor, similar to the ink made from the cuttle and purple fish, as well as that of several other buccins and strombs, &c. DIOGENES, the Cynic, having eaten a piece of their raw flesh, died the same day. Broths made of some species of univalves have been successfully employed in the cure of *ethisies* (perhaps *phthisis?*)

Crustaceous animals afford an agreeable and light but stimulant nutriment, like all the creatures included in this second class of the animal kingdom: they often produce exanthematic eruptions, and a particular turgescence in the blood. They neither abound in albumen, or jelly: the former of these humours appears to exist only in animals that have red blood.

The very numerous class of insects afford but a small proportion of aliment to man, and which is unwholesome. These animals often produce an extremely corrosive acid, which appeared to me uniformly the same: and I think that the bombic acid is so homogeneal with the formic, that there is no just ground for distinction. Insects, when swallowed, act particularly on the secretory organs of the urine; and their influence also extends to the contiguous parts. The effects of certain insects of the class *Coleoptera* are generally known, such as the *Lytta vesicatoria*, FABR. *Meloes*, *Lampiris*, *Buprestis*, *Mylabris cichorii*, and several others. It is said that the Hungarians swallow cantharides without danger, for the cure of a species of mania: several nations feeding upon insects are also mentioned by writers, as well as some acridophages, such as the Arabs and Moors. The quails of the Israelites were only a kind of locusts, which produced inflammation in the throat. The continual use of honey also occasions aphthous eruptions, and is said to render the teeth carious, particularly in the southern countries, where the heat accelerates the effect of all poisons produced by organized bodies. There are, however, some particular idiosyncrasies in whom the internal use of insects disagrees: the learned ANNE SHURMAN is an instance of this peculiarity. I could quote a thousand similar examples. The women of Kamschatka search for spiders, and eat them with avidity, from an idea that such food will render them prolific. We have lately discovered the anti-odontalgic property of

 several

several species of the *curculio*, *carabus*, *chrysomela*, and *coccinella*; and that crickets possess the same virtue as cantharides.

We shall now consider the last class of the animal kingdom, the most distant from mankind, that of the star-fish and zoophytes. This class is less useful than those before-mentioned. The creatures it comprises are formed of a sort of jelly that is entirely decomposed by heat. I will not insist, that they contain only a small quantity of nutriment; but I must remark, that the greater part of them, far from being alimentary, are poisonous; and that their whole substance is composed of a sort of nauseous and caustic virus, which not only affects the stomach but extends its action over the whole surface of the body. If this deleterious quality (which increases in proportion to the heat of the climate) does not affect the fish feeding on it, whether of the mollusques or crustaceous kind, yet the flesh of the latter easily partakes of that poisonous property, and becomes deleterious to the more perfect animals, such as birds, quadrupeds, and man. It is unnecessary to mention numerous proofs of this fact, which might easily be procured; as the mere contact of several of these animals has a caustic effect, sufficient to poison the prey on which they feed.

[To be concluded in our next Number.]

A concise History of the principal Discoveries in Anatomy:

Continued from our last Number, pp. 71—79.

§ 29. THE knowledge of the *organs of generation*, and their functions, was considerably promoted in the sixteenth century, by the united exertions of the most eminent anatomists; though they were still unacquainted with many particulars. For instance, with respect to the external male organs of generation, the origin of the *corpora cavernosa penis* was not quite familiar even to EUSTACHIUS,* as he derived them from the urinary bladder and the prostrate gland, instead of deducing them from the arcus ossium pubis.

The greatest anatomists of the age were much mistaken with respect to the tunica albuginea testis. They were of opinion, that this tunica was actually connected with the abdomen by an orifice which was constantly open.† Though this holds good

* *Eustach.* Tab. xi. fig. 11. *(KK.)*
† *Vesal.* lib. v. c. 13. p. 449.—*Fallop.* instat. anat. p. 439.

good in the embryo, it is not discoverable in a new-born infant. About the 20th day after birth, the sides of the orifice so firmly adhere, that no aperture is distinguishable. To other authors it appeared, that in the descent of the testicles only one of the lamina of the peritoneum passed down, to form the tunica albuginea, and the other remained in the abdomen.* VESALIUS had remarked that the white coat of the testicle was subservient to the transmission of certain ducts, and consequently appears to have observed the vascula Graafiana with accuracy.† MASSA‡ described the prostrate gland, and subsequent to him VESALIUS§ and COLUMBUS.‖ The discovery of the *vesiculæ seminales* must be attributed to FALLOPIUS.¶ Prior to him, BERENGAR had indeed given some account of the winding ducts, and the cellular texture, in which the vasa deferentia are convolved,** as likewise STEPHANUS seems to have known them; †† but both express themselves obscurely on the subject. VESALIUS first acquired from FALLOPIUS the knowledge of the vesiculæ seminales,‡‡ and Eustachius, at the same time, gave a representation of them.§§ RONDELET likewise found them distinct in the dolphin.‖‖ Finally, they were accurately described by VAROLI ¶¶ and ALBERT.***

With respect to the female organs of generation, FALLOPIUS first distinctly described the clitoris, and its resemblance to the penis.††† But VESALIUS considered this description extravagant, and as being merely the result of observations made on some anomalous cases.‡‡‡ COLUMBUS also deserves censure, for expatiating too much on the nature of the clitoris, in order to introduce indelicate expressions.§§§ EUSTACHIUS appears to have been the first anatomist who represented the sphincter vaginæ.‖‖‖ It is singular that there should, even in this century, arise any dispute about the existence of the membrane which partly precludes the vagina in virgins, and which the ancients had called *hymen*. We find, however, that the opinions and sentiments of authors, concerning this part, widely differed. ACHILLINI maintained the existence of a virginal

* *Fernal.* part. corp. human. descript. lib. i. c. 7. p. 40.
† Vesal. lib. v. c. 13. p. 448.
‡ Introduct. p. 34.
§ L. c. p. 450.
‖ Lib. xi. c. 13. p. 436.
¶ Obs. p. 419
** Isagog. p. 186. Comment. in *Mundin.* f. 302. b.
†† Stephan. de dissect. p. 199.
‡‡ Exam. obs. Fallop. p. 816.
§§ Tab. xii. fig. 3. (VV.)
‖‖ De Piscibus, lib. xvi. c. 8. p. 461. (fol. Ludg. 1551.)
¶¶ Anatom. lib. iv. c. 1. p. 87
*** Histor. part. p. 68.
††† Obs. p. 423.
‡‡‡ Exam. obs. Fallop. p. 819.
§§§ Lib. xi. c. 15. p. 447.
‖‖‖ Tab. xiv. fig. 1. (XX.)

virginal hymen, but certainly did not know it, when he contended that it was placed in the orifice of the uterus.* FALLOPIUS described it first, and best of all the anatomists of this century; † but VESALIUS, who partly admitted its existence, described its fibres to be muscular, and observed, that the cases which had occurred to him, were extremely rare.‡ PARE likewise assures us, that he never met with an *hymen*.§ By COLUMBUS we are informed, that this membrane seldom exists, and renders coition almost impossible, from its remarkable thickness.‖ VAROLI decidedly disbelieves in the existence of the hymen; but understands by it, the præternatural *concretion* of the labia interna pudendorum.¶ DU LAURENS is of the same opinion, and supposes this membrane to be an organic disease, but never admits its existence in a natural state.** PINEAU, considers even the carunculæ myrtiformes of the inner labia, instead of the hymen, as an infallible proof of virginity.†† In short, FALLOPIUS was the only anatomist, who knew and described this part with sufficient accuracy.

§. 30. With respect to the uterus, its ligaments were not completely understood in the sixteenth century. GABRIEL ZERBI described, however imperfectly, the round ligaments; ‡‡ and besides, like LE VASSEUR,§§ admits adhesions of the uterus to the kidneys, which, however, do not exist. LE VASSEUR also describes, though not completely, the broad ligaments. VESALIUS calls the round ligaments muscles, but represents their progress very erroneously; yet he seems to have been acquainted with the alae vespertilionum, and their membranous expansion.‖‖ He censures GALEN, for having described an animal uterus instead of a human; ¶¶ and yet, as SYLVIUS justly remarks,*** VESALIUS's representation is, in many respects, not conformable to human nature, as he admits a threefold disposition of muscular fibres in the uterus,††† and has committed various other errors. FALLOPIUS denominated the round ligaments cremasteres, and proved in opposition to VESALIUS, that they were not muscles; he correctedly described their progress through the aponeurosis of the oblique

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* Annot in Mundin, p. 4.

† Obs. p. 420.

‡ Lib. v. c. 14, p. 457.—De radic. chyn. p. 663.—Examp. obs. Fallop. p. 819.

§ Liv. xxiv. ch. 49. p. 624.—xxviii. p. 773.

‖ Lib. xi. c. 15. p. 446.

¶ Anatom. lib. iv. c. 4. p. 97.

** Hist. anat. lib. vii. qu. 13. p. 562.

†† De virginit not. lib. i. c. 5. p. 48. (12. LB. 1641.)

‡‡ *Zerb.* anatom. p. 43.

§§ *Vassei* in anatomen. tab. p. 10.

‖‖ Lib. v. c. 15. p. 461

¶¶ De radic. chyn. p. 663.

*** Vesan. Column. depulf. p. 113.

††† Exam. obs. Fallop. p. 818.

oblique descending abdominal muscles, their round and excavated structure at their insertion, and their termination in the adipose membrane of the mons veneris; he demonstrated that they were sometimes the origin of ruptures in females; but still compared them too much with the cremasteres of the testicles, according to the old prevailing idea, that the female sex have internally all the male organs of generation.*

We are indebted to EUSTACHIUS for the first true representation of the human uterus, though even he omits the broad ligaments and the alæ vespertilionum† belonging to that organ. COLUMBUS, merely following FALLOPIUS, described the round ligaments, under the denomination of *processus uteri*; ‡ but PICCOLHUOMINI gives a correct account of these, as well as of the other connections of the uterus with the contiguous parts.§ The *tubæ fallopianæ*, which till that time had been always confounded with the cornea uteri in animals, were first properly distinguished by FALLOPIUS, and called by the abovementioned name; he represented their inner flakey texture, as well as their undulatory windings, their external larger aperture, and the fimbriæ surrounding the ovaria, which he called female testicles. He farther considered them as vasa deferentia of the female semen, for he pretended to have frequently observed true semen in them, but never in the ovaria.‖ Nevertheless, PICCOLHUOMINI denied the existence of the tubæ in the human uterus.¶ The hypothesis of the ancients, that women secerned semen as well as men, and that it was preserved in the ovaria, or female testicles, received still greater confirmation from the assertion of COLUMBUS,** that he had positively observed semen in the female testicles, and exhibited it to many of his pupils. FALLOPIUS, in describing the structure of the ovaria, admits of vesicles filled with a limpid or yellow humour, which strongly indicates that he was acquainted with the ova graafiana and the corpora lutea.†† VESALIUS likewise described the vesicular structure of the ovaria ‡‡ COITERUS demonstrated their existence in ruminating and other animals; but he admitted three membranes of the ovarium, one originating from the peritoneum, and forming a thin and loose exterior surface, and loosely surrounding it externally, the second uniting the vesicles, and the third

* *Fallop.* obs. p. 421.
† Tab. xiii. xiv. fig. 1. 2. 3.
‡ Lib. xi. c. 15. p. 447.
§ Anatom. prælect. p. 186.
‖ *Fallop.* obs. p. 421.
¶ Anatom. prælect. p. 195.
** Lib. xii. p. 433.
†† L. c.
‡‡ Exam. obs. Fallop. p. 820.

third he seems to have confounded with the fumbriæ of the tubæ fallopianæ.*

§. 31. Misled by zootomy, many of the ancient physicians admitted, even in the human uterus, of *cotyledones*, such as are formed by the placenta of different animals; but VESALIUS shewed, that this term had various significations, because the distended orifices of the veins, even in the unimpregnated state of the animal uterus, were thus denominated; which, however, could not apply to the human uterus.‡ A farther explanation of this subject was given by FALLOPIUS.† PUTEUS, with superficial arguments, vindicated the presence of the cotyledones against VESALIUS, in the human uterus; § but ARANZI totally denied their existence, unless the orifices of the vessels were to be so denominated; ‖ and FABRICIUS, therefore, adopted them in that sense.¶ The connection of the infantile fœtal part of the placenta with the maternal, likewise engaged the attention of the anatomists of the age. ARANZI disputed all communication of the vessels, as had commonly been adopted.** DU LAURENS admitted, that there was no true inosculation of vessels, but yet there existed a contiguity among them, sufficient for effecting resorption; †† and FABRICIUS asserted an anastomosis of the vessels on both sides.‡‡

The old opinion, that the conception of girls took place on the left side, and of boys on the right, still found several advocates in this century, of whom we shall only mention BERENGAR.§§ He proposed a theory, which afterwards was vindicated by almost all the anatomists, even by FABRICIUS; namely, that the liquor amnii originated merely from the perspiration of the fœtus.‖‖ This assertion, however, is particularly objected to, in consequence of the remark, that a similar liquor had been found in unimpregnated eggs, and that it existed in a greater quantity, accordingly as the embryo approached to evolution.¶¶ FALLOPIUS seems to allude to the *tunica decidua Hunteri*, when he speaks of the cotyledones; though it cannot positively be asserted that he really knew it.***

MASSA

* Obs. p. 124.
‡ Obs. p. 422. f.
† Lib. v. c. 16. p. 467.—De radic. chyn. 645.u
§ Apolog. f. 164. b.
‖ De fœtu human. c. 2. p. 5.
¶ De format. fœtu. p. 49.
** L. c. c. 10. p. 28.
†† Lib. viii. qu. 24. q. 664.
‡‡ L. c. p. 38. 43.
§§ Commentar. in Mundin. f. 220. b.
‖‖ *Berengar*, l. c. f. 261. *a*—*Fabric.* de format. fœtu. p. 37. 91.
¶¶ *Diemerbroek*, anatom. lib. I. c. 31. p. 212.
*** Obs. p. 423.

—— MASSA,* SYLVIUS,† and even VESALIUS,‡ defended the existence of a third peculiar membrane, denominated *allantois* by the Greeks, and of which it was conjectured, that in the human embryo, as well as in the animal, it contained the urine of the fœtus, which it received from its urinary bladder by way of the urachus, as a true canal; nay, PUTEUS asserted, that he had seen a human allantois replete with excrements.§ FALLOPIUS was, in this instance also, the first who preferred observation from human nature to all the inferences drawn from comparative anatomy. He proved, that the urachus in the human foetus did not terminate in a particular membrane, but between the chorion and amnion.‖ Yet, he was mistaken in asserting, that the urine in the human fœtus was evacuated through the urachus, and flowed into the intermediate space between the amnion and chorion; that the latter membrane is provided with vessels in animals only, and not in the human fœtus; and hence, the urine could accumulate only in the latter, as in animals it would corrode the vessels of the chorion. EUSTACHIUS ¶ went still farther in asserting, that there existed neither an allantois nor an aperture of the urachus in the human fœtus. VAROLI endeavoured to confirm this assertion by new arguments;** but FABRICIUS, though he disbelieved the existence of the allantois in the human fœtus, he admitted of an opening of the urachus between the chorion and amnion, and maintained with FALLOPIUS, that this place was destined as a reservoir for the urine of the human fœtus.†† FABRICIUS has certainly not consulted Nature, or he would have discovered, that the intermediate space between the two last mentioned membranes, on account of the expansion of the amnion, is in the second month of pregnancy so small that it would admit scarcely any thing but a highly rarified vapour.

The anatomists of this century likewise made remarkable observations on the evolution of the embryo. COITERUS discovered in a sow, on the tenth day after conception, a vitreous substance, enclosed in a membrane, which contained an embryo with distinct blood vessels.‡‡ VAROLI observed, on the twentieth day after conception, an embryo, of the size of a barley-corn, but of a form not dissimilar to a kidney-bean.§§

[To be continued in our next Number.]

* Introduct. f. 15. a.
† Isagog. p. 13.
‡ Lib. v. c. 17. p. 470.
§ Apolog. f. 155. b.
‖ Obs. p. 424.
¶ Off. exam. p. 204.
** Lib. iv. c. 5. p. 113.
†† De format. fœtu. p. 91. f.
‡‡ *Coiter*. obs. p. 124.
§§ Anatom. lib. iv. c. 4. p. 102.

HINTS AND IMPROVEMENTS

IN THE PRACTICE OF

MEDICINE, SURGERY, AND PHARMACY.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS the Phymosis is a symptom that often occurs in consequence of the venereal gonorhœa, and for the removal of which an operation becomes sometimes necessary—if the following deviation from the usual mode of relieving that complaint be thought deserving a place in your Journal, you will oblige me by inserting it therein.

The preputium being formed by a duplicature of the common integuments, connected together by a loose cellular substance, it will be found in general (not always) to be the inner doubling of the skin, or that part next to the glans penis, which in most cases forms the stricture in the phymosis; the outward skin will commonly be found looser, and to have but little concern in hindering the prepuce being drawn back; a division of the inner duplicature only will be all that is necessary, in most cases, to accomplish the purpose of removing the stricture; and in all cases will so far remove it, that in a few days, by proper treatment, the inflammation will subside, so that the prepuce may be drawn back with ease.

So long since as the year 1769, when I was surgeon of the Prince of Wales Indiaman, Mr.———, passenger in the said ship, being in great pain from a phymosis, with so much inflammation on the prepuce as to apprehend a sloughing or mortification would be the consequence, applied to me; after fomenting and syringing the parts frequently during the day, with such medicines as I thought proper, the next day, he being no better, I represented to him the urgent necessity of removing the stricture, and explained to him the usual operation on such occasions, and likewise a method I had before in contemplation; but how far it would succeed I was not able to tell, having never had an opportunity of performing it; but as this appeared

appeared to him so much preferable to the other, he readily acquiesced, and I performed it in the following manner:

Having first drawn back the skin as far as I could, I gave it a snip with a pair of bent scissars, not more than about the eighth of an inch; I could now draw back the skin a considerable way further, so as to divide the inner doubling about a quarter of an inch more; this second snip gave so much liberty that I could now draw back and divide so much of the inner part as enabled me to get the whole prepuce over the glans; and both my patient and myself thought it a very judicious mode of operation, until I attempted to bring the skin forward again as I expected, but unfortunately was not able to do it. I was now fearful we were in a worse situation than before, as there was reason to expect a paraphymosis would be the consequence. As he felt little or no pain from girt or structure above the glans, I put on a plaister of cooling cerate, fomented the part frequently, gave him cooling medicines, by which and the local bleeding, on the third day, the skin came forward, and with no more deformity at the edge of the prepuce than is often left after a well-performed operation for the hare-lip: I have performed this operation twice since; in both of which cases it fully answered my expectations.

Although in the first case a paraphymosis did not follow, it nevertheless gave me such alarm, that, in the other two, I took the precaution of dividing the inner skin higher up, (which I might have done in the first) and of not immediately retracting it over the glans; but brought it forward, till the inflammation subsided, and the prepuce would easily pass over the glans.

I would not wish it to be understood that I think this mode of operating applicable to every case of phymosis; many there are, where the integuments are so much thickened, and others where the connecting cellular membrane has acquired such a degree of adhesion by the inflammation, as not to allow of the necessary retraction.

Should this trifle meet with your approbation, I may send you some other (I believe, hitherto unthought of) medical hints.

I am, GENTLEMEN,

Your most obedient servant,

JAMES WOODCOCK.

Aldborough, near Aylsham,
Norfolk, Jan. 10, 1800.

Account

Account of a new Poultice, lately proposed by Mr. T. PAYNE, *Surgeon, Brook Street, London.*

FROM the second edition of a small pamphlet, addressed by Mr. Payne to the Faculty, we extract the following remarks: " It may appear strange," says the author, " to those who do not enter into the minutiæ of surgery, that I should look upon the proper application of so simple a remedy as that of poultice, as an essential object, (which certainly I do, as well as many other (*deemed*) little things in surgery); but having met with repeated proofs of the necessity of it, I have decidedly formed my opinion on this head. What gave me the first idea respecting the subject of this publication, was, that in the Parish Infirmary of St. George, Hanover-square, to which I have the honour of being surgeon, frequent complaints were made by the patients under my care, that the poultice was uneasy and caused much irritation: this, I supposed, arose from the circumstance of its not being made of bread so good as usual, (an alteration having been made in that article in the house) on which account I thought it my duty to remedy it, if possible, for the ease of the poor afflicted patients. I immediately set about making experiments, many of which I need not mention, as I have formed a poultice which succeeds beyond my most sanguine expectations, and I flatter myself it may prove of some utility. The composition will not only save full half the expence of the former poultice, but the consumption of BREAD CORN entirely; a most desirable object to accomplish in the present scarcity of that article; which affords me infinite pleasure, and I make no doubt will prove a stimulus (if any be necessary) to those gentlemen into whose hands this may fall, to induce them to give it a fair and impartial trial. The particulars and expence attending the late and present poultice in use at the aforesaid Infirmary, per week, are as follow:

" OLD POULTICE.

	s.	d.
Bread 49lb. at 2¼d. per pound	10	2½
Milk 14 quarts, at 2d. per quart	2	4
Lard 2¼lb. at 9d. per pound	1	8¼
	14	2¾

" NEW

"NEW POULTICE.

	s.	d.
Fine Pollard $3\frac{1}{2}$ pecks, at 6d. per peck . .	1	9
Genuine Linſeed Flour 14lb. at 4d. per lb.	4	8
Lard, a quarter of a pound	0	$2\frac{1}{4}$
	6	$7\frac{1}{4}$

"From the above ſtatement, I hope, will ſatisfactorily appear, not only the great difference in expence, but the ſaving of forty-nine pounds of bread, per week. Even when oatmeal is uſed for poultices (as is the caſe in ſome hoſpitals) there will be a ſaving of full one-third in the expence; but bread is made of oat meal in many counties of this kingdom, and by the method above ſtated, that article of ſuſtenance is entirely ſaved. Theſe advantages, are, in my humble opinion, highly worthy the attention of every one who has a fellow feeling for the human ſpecies, and a deſire to be uſeful, in any degree, to his country, in a time of general diſtreſs."

On the Medicinal Effects of the Carbonat of Potaſs, or Salt of Tartar, in Puerperal Fevers; by Citizens ALLAN, DEYEUX, GILBERT, *and* LAFFISSE.

[Continued from our laſt Number, p. 80 and 81.]

A Long experience having ſufficiently convinced Cit. Guinot of the advantages of his method, he preſcribes the carbonat of potaſs, as a preſervative againſt puerperal fevers in large hoſpitals, where it attacks every tenth woman in child-bed. He alſo recommends the prudent uſe of ammonia for the purification of the air.

Such is the ſubſtance of the firſt part of Cit. Guinot's Memoir, on which we intend to make ſome reflections, not with a view to diminiſh its value, but becauſe the moſt plauſible opinions ought not to be admitted in medicine, till they have been ſubjected to ſcrupulous inveſtigation.

1. It is now well known, that in general all urine, even that of the moſt healthy individuals, contains a quantity of acid. The uric, phoſphoric, and benzoic acids, are commonly found in it, in different proportions, in a more or leſs diſengaged ſtate. Hence, no particular concluſion can be drawn,

drawn, as the urine of a woman, attacked with puerperal fever, reddened the tincture of turnsol; and, though the tinge appeared deeper than that imparted by the urine of others, this difference might arise from circumstances unconnected with the disease.

2. All women in child-bed exhale an effluvium similar to that of sour milk, particularly when they have full breasts, and are kept very warm. The humour they transpire is then so evidently acid, that blue paper when applied to the skin, in a few minutes, acquires a red colour; and yet, all lying-in women are not afflicted with puerperal fever.

3. The experiments made by Cit. Guinot on different kinds of cheese, by dissolving them with potass, do not prove that the real effect of this medicine in the disease above-mentioned, is that of saturating the superabundant acid: for, what a quantity of alkali would it not require, to absorb all the acid, which he supposes to be extended through the general mass of humours, and in their disposed matter? And is it not probable, that the small quantity of alkali which can be taken into the stomach, is first neutralized by that organ, or, at least, a considerable part of it, by the gastric juice?

4. It is probable, that the milk which accumulates in the abdomen, or is diffused into other cavities, retains its natural fluidity without having undergone any change. In fact, if it were first coagulated by an acid, how is it possible that it could flow over the membranes, or circulate in the cellular texture? The milk changes its nature only after the formation of the sediment. Having undergone this change, it turns acid, and soon becomes putrid. Hence, the acid is, in this instance, the effect and not the cause of the disease.

We may farther convince ourselves of this fact, by attending to the circumstances which commonly attend puerperal fever. Sudden chilliness, excessive joy, tendency to anger, peevishness, fright, and infected air, are often productive of that disease; and yet, none of these causes appear to indicate the existence of an acid, nor to contribute to its formation.

The most constant symptom of puerperal fever, is the dependent and flaccid state of the breasts. If the milk has previously been determined towards these organs, it suddenly disappears on the attack of the disease; but, if the attack of fever commences sooner, the milk does not appear. The real cause then is metastasis of the milk, which has a tendency to deposite particles of a caseous and serous nature, either in the abdomen, as is most frequently the case; in the breast and head, as Bordeu has witnessed; or even in the liver, as has been observed by Doublet, or in the external cellular membrane. The

 symptoms

ſymptoms of inflammation, or putrefaction, which ſometimes intervene, are only ſecondary, and do not conſtitute the principal character of the diſeaſe. It may, as Mr. Whytt imagines, be complicated with the hoſpital fever; and, perhaps, from this reaſon it is ſo common in large hoſpitals. How can the metaſtaſis of the milk, which ſuddenly diſappears from the breaſts, be ſuppoſed to depend on a ſuperabundance of acid? If this acid previouſly exiſted, the milk, inſtead of eſcaping ſuddenly, would coagulate in the breaſts, where it would occaſion obſtructions difficult to be reſolved; but it would not produce puerperal fever, as is proved by experience.

However the theory of Cit. Guinot may be received, his practice is advantageous; by uſing the carbonat of potaſs, either to diſſolve the clotted milk, by neutralizing the acid which may actually exiſt there, or by its action on the organs of perſpiration; or, laſtly, by inducing other uſeful criſes. This will appear from the obſervations contained in the ſecond part of the Memoir, from which we ſhall give an extract.

[To be continued in our next Number.]

Cit. Alibert read a diſſertation on the cholic that prevailed at Madrid. His principal object was to prove that diſeaſes, though perfectly analogous, ought not to be treated in the ſame manner, in different climates. The cholic of Madrid, notwithſtanding its complete ſimilarity to that of Poitou, does not yield to the ſame remedies; and the draſtic laxatives employed in the hoſpital La Charité de Paris, has proved very detrimental to the patients at Madrid. He has added to this memoir, ſome obſervations on the ſtate of the medical art in Spain.—Rapport Général de la Société Philomatique de Paris, vol. ii. p. 82.

Citizens Alibert, Fourcroy, and Hallé, made ſucceſſive reports on the treatment of a man who was covered with a ſpecies of leproſy. This patient was manifeſtly relieved by frictions of oxygenated pomatum, ſo that, when the ſcabby parts were anointed, the incruſtations fell off, and the extreme itching which he previouſly felt, was conſiderably abated. Several other ſatisfactory reports have been preſented to the Society, on the effects of this remedy, in ſimilar caſes.—*Ibid.* 83.

Citizens Alibert and Dumeril have continued their experiments with medicinal ſubſtances applied in frictions. Several children, whoſe abdominal viſcera were conſiderably ſwelled, were purged by rhubarb, and a combination of ſcamony with the

the gastric juice of an owl was administered by friction. Another child three years old, who laboured under symptoms from which hydrothorax was apprehended, discharged a large quantity of urine, in consequence of frictions made with an ointment, consisting of the squill macerated in the gastric juice of a dog, and mingled with hogs-lard. The bark was also administered in a similar manner, which prevented fever in some patients, and diminished or changed it in others.—*Ibid.* 83, 84.

Cit. Faivre transmitted a memoir on the effect of opium and the super-oxygenated muriat of mercury, administered by frictions in the treatment of venereal diseases. By this process he cured an exostosis which he had in vain attempted to reduce by internal remedies, as the delicate nature of the disease precluded the administration of the latter.—*Ibid.* p. 84.

Cit. Larrey presented a memoir on the disorganization of several of the abdominal viscera, by the kick of a horse, without lacerating the skin. The patient felt an excruciating pain throughout the abdomen; this agony increased, was accompanied with vomiting, and succeeded by death, in about fifteen hours. On opening the body, a part of the transverse colon was found suffused with blood. The gall-bladder was full and distended, part of the liver swollen, the mesocolon divided, and the second curvature of the duodenum was partly torn; there was also a discharge of blood and alimentary matter.—*Ibid.* p, 85, 86.

The same member informed the Society, that he had recently performed an operation upon a young woman, about twenty-five years of age, whose genital parts were imperforate. The skin was continued on the pubis, leaving only a small aperture for the passage of the urine. She had never menstruated. Cit. Darrey opened the external skin, which covered the pubis, and thus restored the parts to their natural state.—*Ibid.* p. 86.

Cit. Pajot des Charmes, read an essay on the effect of alkaline substances employed in the treatment of *fistulæ lachrymales.* He was induced to report his experiments on this subject, in consequence of his having observed, that the use of a piece of linen, newly washed, and thus saturated with an alkaline lye, after several applications, effectually relieved the symptoms of that disease. This simple method, according to his experience, uniformly and perfectly removed the complaint.—*Ibid.*

Pharmaceutical

Pharmaceutical Processes.

Professor HUFELAND, of Jena, in his Journal of the Practice of Medicine, Vol. IV. Number II. p. 360, mentions the *Sulphat of Ammonia*, as a remedy much brought into practice in England. Prof. TROMSDORF recommends the following method of preparing it, which is worthy of attention. Liver of sulphur, produced by melting equal parts of sulphur and potass, is powdered, placed in a phial, and the sulphureo-hydrogen gas being disengaged by means of diluted muriatic acid, is transmitted into a high jar, filled with *spiritus salis ammoniaci*, which has been obtained by distilling one part from a mixture of one part of sal-ammoniac, one fourth part of powdered quick lime, and six parts of water. The sulphureo-hydrogen gas combines more readily with the liquid ammoniac, in proportion to its coldness. It must be disengaged till no more can be absorbed by the ammonia. The preparation requires to be well defended from air in a closely stopped glass vessel.—*Journ. der Pharmacie*, B. v. p. 149.

On the Separation of Soda from Marine Salt, and the Depuration of Potass.

A mixture of twenty parts of muriat of soda and thirteen parts of the carbonat of potass, produces muriat of potass, and carbonat of soda; but the two salts are separated with great difficulty. Cit. VAN MONS has, however, adopted a very proper and effectual method. He deprives the soda of its carbonic acid by quick lime; the soda thus rendered caustic, remains in the mother ley uncrystallized, while the muriat of potass forms crystals. The soda must afterwards be evaporated, and ignited in a crucible with powdered charcoal. Thus it again becomes mild, susceptible of crystallization, and may be easily purified.

The depuration of potass may be performed in a manner exactly similar to the preceding, by which it may be purified of all its heterogeneous ingredients.—*Chem. Annal.* B. I. p. 40.

Vitriolated Kali.

M. KASTELEYN added twenty-four parts of sulphat of magnesia to twenty parts of muriat of potass. He obtained muriat of magnesia, and sulphat of potass. The former being very deliquescent, the latter is easily separated by crystallization. The product is from sixteen to eighteen parts of vitriolated tartar, and twelve parts of a dry muriat of magnesia.—*Ibid.* p. 41.

Magnesia.

The muriat of magnesia, which was produced during the preparation of vitriolated kali from muriat of potass and sulphat of magnesia, requires only to be distilled in a retort, with some water at a proper temperature, till no vapours arise, in order to deprive it of all its muriatic acid, which is but slightly combined with the magnesia. The produce is two-thirds in weight of the employed muriat of magnesia, and is tolerably concentrated. The third part, which remains in the retort, is pure magnesia, and which, edulcorated in water, may be deprived of the small quantity of a neutral salt which still adheres to it undecomposed.—*Ibid.* p. 41.

Muriat of Barytes.

Dr. Richter employs an excellent method of exhibiting this salt in pure white crystals, without expence or loss of time. He mixes pulverized heavy spar into a paste, with a saturated solution of carbonat of potass, and suffers it to dry as quickly as possible; he then pounds it again, and subjects it to a red heat. The vitriolated kali thus obtained, is edulcorated with water, and the earthy residuum treated with muriatic acid in the usual manner. The remaining undissolved ponderous spar, is afterwards moistened with a solution of potass, dried, and ignited. This process is repeated till all the spar is dissolved, or till there remains but a very inconsiderable quantity. The muriatic solutions of barytes are afterwards evaporated to dryness, and the inspissated ley is melted in a crucible, poured out on a tin plate, dissolved in five times its weight of water, and purified by filtration. The liquor thus treated, is transparent like water, and when slowly evaporated and refrigerated, yields the purest and most regular crystals of barytes: the crystallization is continued till there is an alteration observed in the form of the crystals, which indicates the appearance of the strontian earth that is contained in the ponderous spar. By this method, a much smaller quantity of potass is required than in the usual mode of preparation, by melting potass together with ponderous spar.—*Ibid.* B. I. p. 334.

An improved Method of preparing Plaisters and Ointments, in which fresh Plants or their Juices are used as Ingredients; such as Empl Cicutæ, Ungu. Popul. &c.

Citizen Van Mons carefully expresses the juice of plants, and exposes it to a moderate heat. The extract thus produced, is

is dried as much as it will admit of, pounded in a mortar, and put on the fire with oleaginous ingredients, till the evaporation of all humidity is effected: by this means, he introduces into the plaisters, only those parts of the plants which are soluble in fat substances, and avoids the tedious evaporation which decomposes the most efficacious vegetable particles. This preparation has, besides, this advantage, that its proportion can be more exactly ascertained, as it is deprived of all heterogeneous matter, which is often combined with the common extracts. *Ibid.* p. 636.

Concentrated Lemon Juice.

Dr. Brugnatelli filters the expressed juice of ripe lemons through linen. He then adds some highly rectified alcohol, and places the mixture for some days in a closely stopped phial; during this time, a considerable quantity of mucous sediment is deposited, which must be separated by passing the liquid through a filtering paper; and if it should be too thick for percolation, it ought to be mixed with an additional quantity of alcohol. This filtrated liquor contains the purest citric acid, combined with alcohol; the latter may be separated by slow evaporation. After having been deprived of all the alcohol and watery particles, the acid assumes a yellowish colour, and is so strong, as to be similar in taste to a mineral acid. *Ibid.* B. I. p. 160.

Hahnemann's Liquor Probatorius Fortior.

Two drachms of the essential acid of tartar are dissolved in sixteen ounces of pure water, at a temperature of 90°; to this solution are added two drachms of hepar sulphuris, reduced to a fine powder. The mixture is shaken for ten minutes in a capacious bottle, and then allowed to stand quietly for half an hour. The clear fluid must be decanted into another bottle, containing additional four drachms of the essential acid of tartar, which is easily dissolved by shaking it; if the liquor should be turbid, it ought to stand for twenty-four hours, and should afterwards be poured off slowly into another vessel.

This acidulated hepatic solution is of a milky colour; and a table-spoonful of it poured on two or three ounces of a suspected wine, which is adulterated with sugar of lead, or other metallic ingredients, will form a precipitate of a more or less brown colour; but if the wine remain limpid, we may conclude that it is pure, and free at least from metallic adulteration. *Göttlings Praktische Vortheile für Apotheker. Ed. 3d.* p. 353.

MEDICAL AND PHYSICAL

INTELLIGENCE.

(Original and Selected.)

CIT. HALLE read a Memoir on the *History of the Curative Art*, in which he particularly considered the periods when it has made real progress. He states the first epoch to have been from the time of Hippocrates to that of Sanctorius; the second, at the time of Sanctorius; as he was the first who boldly appealed from the doctrine of the ancients to experience; the third, at the restoration of the physical sciences in Europe: and the fourth, from the discovery of various aëriform fluids, and the introduction of modern chemistry. He inquires, during each of these periods, into the state of the curative art, or the art of preserving the health of man in society, either by its connection with the legislature, the manners of the age, or the public police; as, likewise, the art of preserving the health of man considered as an individual.

This Memoir contains some valuable remarks on physical education, gymnastic exercises, dress, philanthropic establishments; others, for the prevention of contagious maladies; on houses of correction; on the diseases of soldiers; on the influence which the construction of towns and villages, as well as their situation, manifest on the health of citizens and husbandmen. The substance of this paper has been inserted in the French Methodical Encyclopedia, under the head of *Hygiène.—Rapport Général des Travaux de la Société Philomathique*, Vol. II. p. 81, 82.

Citizens ADET and CHAPTAL presented Memoirs on the *difference between the acetic and acetous acids.* The former, in consequence of repeated experiments, was of opinion that these two acids did not differ on account of their proportions of oxygen, but by a greater degree of concentration which the acetic acid owes to the evaporation of its water, in a combination with metallic oxyds, or alkalies. He made an unsuccessful attempt to superoxygenate the acetous acid, or to disoxygenate the acetic acid; and he hoped eventually to ascertain the non-existence of the acetous, and that the only difference between the acetic acid extracted from the acetat of copper, and that from vinegar, depended on the smaller quantity of water contained in the former. Cit. Chaptal has drawn different conclusions from his experiments. He always discovered in the acetic acid, though it possessed only the same degree

gree of concentration as the acetous acid, a more penetrating smell and taste, and that it was much more powerful in the dissolution of earths and metallic oxyds. New experiments have induced him to believe, that the difference between these two acids must be ascribed to the circumstance, that the acetic acid contains a smaller quantity of carbon than the acetous.—*Ibid.* p. 25, 26.

Cit. VAUQUELIN communicated to the Society, two Memoirs, on a *new metallic acid* which he discovered in the red lead of Siberia. He ascertained, by experiments, that this substance differed from all other known minerals; as it had the property of changing all its saline or earthy combinations to a red or orange colour. This property, and that of producing variegated and beautiful colours when combined with metals, induced him to give it the name of *chrôme*. Its reduction is effected by carbon only, in a strong fire; and on treating it with nitric acid, the chromic acid is reproduced. The chrôme absorbs two thirds of its weight of oxygen, in order to become an acid. This acid might furnish painters with an enamel of permanent colours. Cit. Vauquelin has since met with chrôme in a natural state, in a green oxyd of lead, and in several other substances.—*Ibid.* p. 26, 27.

Cit. VAUQUELIN communicated to the Society, an *analysis of the ruby*, in which he found the chrômic acid of Siberian red lead in a proportion of $4\frac{87}{10}$; but he could not discover the Silex mentioned by KLAPROTH: hence he concluded that the ruby is a kind of saline combination of chrômic acid and alumine.—*Ibid.* p. 27.

The same member announced that he had discovered *chrôme and a new earth in the emerald*, and that he had formerly found these substances in the beryl. He also presented the analysis of the pulverulent chlorite, which contained 26 parts of silex, $18\frac{50}{100}$ of alumine, 8 of magnesia, 43 of oxyd of iron, 2 of muriat of soda, or potass, and 2 of water; a result which is different from all that have hitherto been given in the analysis of chlorites. He attributes this difference, rather to the nature of this apparently mixed earth than to the inaccuracy of chemical operations.—*Ibid.* p. 28, 29.

He also presented the result of his inquiries *on the extractive principle of vegetables*, which has hitherto been but imperfectly known. A number of experiments made on the extracts have convinced him, that they are of a very compound nature. He found that among the saline substances contained in the extract, properly called the acetous acid, the acetites of potass, lime, and ammonia, are those only which are constantly discoverable; that the extract is composed of carbon, hydrogen, oxygen, and azote; and that its property of attracting the humidity of the air, as well as most of

its

its medical virtues, are principally owing to the presence of the acetat of potass.—*Ibid.* p. 29.

The same member, in conjunction with Cit. FOURCROY, analysed a *gouty concretion* which had been spontaneously formed *in the fingers of a man*, that were swelled in the form of a large pear, while his limbs were entirely distorted by that disease. They found that this substance was the urat of soda combined with a considerable proportion of animal matter. The authors, however, did justice to M. Tennant, by acknowledging that he had previously discovered, that arthritic concretions were a combination of lithic, or uric, acid and soda.—*Ibid.* p. 30, 31.

Cit. FOURCROY, while employed in this important research, has written a Memoir on the *Chemical and Medical History of Human Urine*, in which he has described all the saline substances contained in this excretion. He observed, that there existed a particular substance, twenty times more considerable than all others combined, and which merited a particular investigation, the result of which he proposed to communicate to the Society, at a future period.—p. 32.

Cit. LASTERIE read a Memoir on the manner of fabricating *alcazarras*, or *vases of a very porous earth*, used in Spain for the purification of water. These vases are composed of about one-third of calcareous earth, one-third of alumine, one-third of silex, and a very small proportion of iron. The compound earth is divided, tempered, mixed with a twentieth part of sea-salt, and when it has acquired a sufficient consistence, it is put into the furnace; after which the vases formed of it are half baked. Their porosity must be ascribed to this process, and the addition of sea-salt. The water kept in these vessels is gradually filtrated through their pores, and by its continual evaporation acquires a considerable degree of cold. They are much used in Spain and Portugal, where they were introduced by the Arabs; they are likewise made use of in the West Indies, and some parts of Africa. The earth proper for making them is common in France, and the various economical uses to which they might be applied, render them an important object of manufacture.—*Ibid.* p. 32, 33.

In the course of the year 1798, there were eight hundred and thirty-three *patients* received into the *Royal Hospital of Stockholm*, including forty-five who remained from the preceding year. Of this number, five hundred and fifty-six have been cured; one hundred and five died, eight were incurable, and seventy-nine remained for cure. Among these patients, the astonishing number of two hundred and thirty were afflicted with venereal complaints! one hundred and seventy-two differend kinds of fever; seventy-five cases of dropsy, twenty-five of phthisis, &c.—*Le Nord Littéraire*, No. viii. p. 359.

From

From the laſt examination of the Regiſters belonging to the *Houſe of Education at Stockholm*, it appears, that out of 1227 children who have been admitted, 1026 have died; being nearly five out of ſix. This enormous mortality, which ſo frequently attacks children in the firſt year of their age, has engaged the attention of a philanthropiſt, who has endeavoured to inveſtigate the cauſe of this afflicting and increaſing mortality.—*Ibid.* p. 360.

M. RAFN lately read to the Academy of Sciences at Copenhagen, an Eſſay on ſome experiments made by him three years ago, on the vegetation of plants, in ſeveral mixtures of different ſorts of earth; reſearches which he propoſes to continue. It appears from theſe experiments, that it is principally carbon which contributes to the nutrition of the plants, and the fertilization of the ſoil.—*Ibid.* p. 371.

Excellent Writing Ink.

A ſeries of experiments made by RIBANCOURT, has furniſhed us with the following valuable receipt for producing an uniformly black and permanent ink. Eight ounces of galls and four of logwood are boiled with twelve pounds of water for an hour, or till one half of its quantity is evaporated. This liquor is then percolated through a hair ſieve, and four ounces of vitriol, or ſulphat of iron, three ounces of gum Arabic, one ounce of copperas, or ſulphat of copper and one ounce of ſugar-candy are added. The whole maſs is ſtirred to promote the ſolution of the ſalts and gum, after which it is left to ſtand for twenty-four hours. The liquid is then poured off from its coarſe ſediment, and preſerved in well ſtopped glaſs, or ſtone jars. This ink acquires a beautiful black colour, which it retains for a long time.—*Chem. Annal.* Vol. II. p. 48.

Domeſtic Intelligence.

INSTITUTION for the INOCULATION of the VACCINE-POCK, at No. 36, Warwick-ſtreet, Golden-ſquare. Founded Dec. 2, 1799.

THOSE who are acquainted with only a part of the hiſtory of the Small-Pox, ſcarcely take into their contemplation more than the advantages of the *inoculated* over the *natural Small-Pox*, in the points of preſervation of the lives of individuals, and the ſubſtitution of a diſeaſe generally ſlight for a diſeaſe generally ſevere; and ſuch perſons imagine, that the practice of Inoculation neither requires, nor is, perhaps, capable of farther improvement: But thoſe who are more extenſively acquainted with the hiſtory of the Small-Pox, know that it is productive of a great deal of miſchief, notwithſtanding the advantages of Inoculation—for,

1. Under

1. Under the best treatment, a certain proportion of persons die in the inoculated Small-Pox; and although the proportion of deaths to the recoveries may not exceed Five out of a Thousand Patients, the distress occasioned by these fatal cases is more severely felt than when such cases occur in the casual disease; therefore the substitution of a milder disease will contribute to lessen the distress which would be thereby occasioned.

2. It seems fair to calculate, that, in the inoculated Small-Pox, one in twenty-five patients undergoes a severe disease.

3. The numerous sources of the Small Pox infection now preclude every prospect of extinguishing this disease: and unless Inoculation were universally practised, it is most likely that the proportional mortality by the natural Small-Pox is rather increased than diminished, in consequence of the more extensive dissemination of the infection by Inoculation.

4. In a certain proportion of inoculated cases of Small-Pox, deformities of the skin are produced, which no practitioner can be answerable for preventing in any instance. Diseases are also frequently excited by Inoculation, to which a disposition pre-existed in the constitution.

5. In particular families, and in particular states of the constitution, as in pregnancy, &c. the Small-Pox is an exceedingly dangerous disease, even by inoculation. Now, it is manifest, from the accounts which have been collected of the disorder called by the name of the Cow-Pock, and particularly from the experience by inoculation of it since January last, that the hurtful effects of the Small-Pox above stated may be prevented, by substituting for it the Inoculation of the Cow-Pock—Because,

1. Of above four thousand persons who have had the inoculated Cow-Pock, one only has died. There is, however, good ground for believing, that the proportional mortality will be even less than here stated.

2. Not a single well-attested instance has been produced, among more than 2,000 of the above persons, known to have had the inoculated Vaccine Pock, and who were subsequently inoculated for the Small-Pox, of this disease being subsequently taken; although many of these were also exposed to the infectious effluvia of the natural Small-Pox. And, traditionally, this fact has been established time immemorial, with regard to the casual Cow-Pock.

3. It may safely be affirmed, that the inoculated Cow-Pock is generally a much slighter disease than the inoculated Small-Pox; and that the proportion of severe cases in the latter is to the former as at least ten to one.

4. It does not appear that the genuine Vaccine Pock can be propagated like the Small-Pox, by effluvia from persons labouring under it. Hence, if the Vaccine Inoculation should be universally instituted in place of the Small-Pox, it is reasonable to conclude, that this most loathsome and fatal malady will be extinguished; and, like the Sweating Sickness, Plague, certain kinds of Leprosy, &c. be known in this country only by name.

5. It does not appear that the Vaccine Poison, like that of the Small-Pox, can be conveyed so as to produce the disease indirectly from diseased persons, by adhering to clothes, furniture, bedding, letters, &c. Hence no danger of its propagation in these channels is to be apprehended from the universal practice of the Inoculation of the Cow-Pock.

6. It has been found that a person, whose constitution has distinctly undergone the Vaccine disease, is in future unsusceptible of the same disorder. Hence no objection can be made to the new Inoculation, as was once urged, on account of its being believed, that, by the commutation of the Small-Pox for the Vaccine Pock, an eruptive disease would be introduced, to which the same person would be repeatedly liable.

7. It does not appear that those who have already gone through the Small-Pox are susceptible of the Vaccine disease, as was a little time ago believed. Hence no objection can be urged on the score of persons who have already gone through the Small-Pox being liable to a new infectious disease, by the introduction of the Vaccine Inoculation.

8. Experience shews, that there is no reason to apprehend the smallest chance of deformities of the skin from the Vaccine Inoculation.

9. The extensive practice of the Vaccine inoculation in the present year, and the accounts of the disease in the casual way, do not show that any other disease will be excited subsequently, which is peculiarly imputable to the new practice.

It may be useful to add, that the present Institution is perhaps the best imaginable for procuring evidence to inform those who are unacquainted with the new practice; for determining all doubtful points relating to it; and for discovering errors: as every case will be registered; every new trial be made under the direction of the Medical Establishment belonging to the Institution; and the results of the practice will be reported to the Governors.

From the above comparitive statement, it is manifest that it is highly to the interest of the British Public to adopt universally the Inoculation, of the Vaccine Pock in place of the Small-Pox. And that the poorest ranks in society may enjoy the benefit of the new Inoculation, the following Plan of an Institution is submitted to the consideration of benevolent persons; confiding, that it will be readily perceived, that, perhaps, no charitable institution ever promised to be productive of so much benefit at so little expence; and that, when the objects are well understood, it will receive such aids as are necessary to its establishment and maintenance.

The predecessors of our august Sovereign afforded a decisive proof of their wisdom and philanthropy in introducing the Small-Pox Inoculation, not only by the encouragement which they gave to others, but by setting the example of the practice in their own family: and a most destinguished Prince of the same illustrious family, having previously not thought it unworthy of him to be informed, by the experience of the new Inoculation, among certain

orders in society, to whom he graciously extends protection, has deigned to confer the honour of his Patronage on the present Institution.

PLAN.

1. At a House to be called The INSTITUTION FOR THE COW-POCK or VACCINE INOCULATION, a Physician and a Surgeon shall attend every Tuesday and Friday, at one o'clock, to examine, inoculate, and prescribe for the Patients, who shall attend at the Instution at such times as they shall be directed by the Physician and Surgeon.

2. An Apothecary shall also attend at the same time with the Physician and Surgeon, to discharge the duties of his department.

3. The Patients admitted to receive the benefits of the Institution shall be those who apply with recommendatory letters from the Governors.

4. The Patients shall be supplied with proper medicines at the expence of the Institution, and, when necessary, be attended at their own houses.

5. Subscribers of one guinea annually to the Institution shall be entitled to a right of having two Patients constantly on the books of the Charity; or they shall have the same right during life, by paying ten guineas at one time. Subscribers of larger sums may have the right of having a proportionally greater number of Patients constantly on the books.

6. The Subscribers are to be called Governors; they shall possess the power of transacting all the business relating to the management of the Institution, in such a manner as shall be agreed upon by themselves.

7. The Subscriptions shall be employed to defray the expences of the Institution.

8. The establishment belonging to the Institution shall consist of a Patron, a President, six Vice-Presidents, a Treasurer, and the Governors, besides the necessary Medical Officers for carrying on the business which is the object of it.

9. The medical duties are to be discharged gratuitously by two Physicians, two consulting Surgeons, two Surgeons, and three visiting Apothecaries. These officers are to be Governors.

10. There shall be a resident Apothecary, to prepare and dispense medicines; a Secretary, a Collector, a Porter, and such other Officers as shall be found necessary.

The Form of a recommendatory Letter:

I recommend the Bearer, as a proper object for the Benefit of Inoculation at the Cow-Pock Institution.

PATRON,

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A printed Account of the Inſtitution may be had, and Subſcriptions are received at the Inſtitution, No. 36, Warwick Street; and at the banking houſes of Devaynes, Daws, and Noble, 39, Pall-Mall; Coutts and Co. 39, Strand; Ranſom, Morland and Co. 57, Pall-Mall; Hammerſleys, Montolieu, and Greenwood, Pall Mall; Birch, Chambers and Hobbs, New Bond Street; Edwards, Templer, Middleton, Johnſon and Wedgewood, 18, Stratford Place, Oxford Street; Wright, Selby, and Robinſon, 5, Henrietta Street; Child and Co. 1, Fleet Street; Preſcot, Grote, and Preſcot, 62, Threadneedle Street.

Dr. Pearſon will commence his uſual ſpring courſes of Lectures on the Materia Medica, Practice of Phyſic and Chemiſtry, on Monday, February 3d, at his Elaboratory, in Whitcomb-ſtreet, Leiceſter-Square.

Dr. Crichton's Medical and Chemical Lectures, (which by accident have not been announced in our laſt Number) commenced on Monday, January 27th, at his houſe, No. 15, Clifford-Street. The Theory and Practice of Phyſic is delivered every day in the week, Sunday excepted, at eight o'clock in the morning; Chemiſtry every Monday, Wedneſday and Friday, at nine; and the Materia Medica, every Tueſday, Thurſday, and Saturday, at the ſame hour.

Dr. Jenner, to whom the world is indebted for the introduction of the Variolæ Vaccinæ into the practice of Inoculation, has in

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the preſs new editions of his Treatiſes* on that important ſubject, with the addition of a copious appendix.

We underſtand, Mr. James Macartney is engaged in preparing for the preſs a tranſlation, accompanied with notes, of Prof. Soemmering's Syſtem of Anatomy now publiſhing in Germany, under the title, *De corporis humani fabrica*, a work univerſally admired, and poſſeſſing much original merit. Mr. M. alſo propoſes ſhortly to publiſh a ſmall work upon the Human Muſcles, the plan of which is in many reſpects new: it is deſigned to include the relation which each muſcle bears to other parts; and the combined operation of the muſcle in the functions and motions of the different parts of the body.

The fifth part of Mr. Charles Bell's Syſtem of Diſſections† (price 5s. 6d. each number; Johnſon, Longman and Rees) has lately appeared: it contains diſſections of the back part of the thigh, and of the leg and foot. We venture to ſay that this, when completed, will be a valuable work, both on account of the accuracy of the deſcriptions, and the fidelity of the engravings.

Dr. Batty will begin his Courſe of Lectures on the Theory and Practice of Midwifery, and on the Diſeaſes of Women and Children, on Monday, February 10th, at his houſe, No. 6, Great Marlborough-ſtreet, at half paſt ten o'clock in the morning.

Dr. Willich having, in one of the late Reviews, met with a malevolent and unwarrantable attempt to miſrepreſent the obvious tendency of his "Lectures on diet and Regimen," he takes this opportunity of informing the Reviewer, whoſe name he underſtands is Dr. B****, that he is ready to prove ſatisfactorily, not only the fallacy of the inferrence drawn againſt the propriety of the Dedication, but alſo to demonſtrate the falſehood of the two other aſſertions contained in that abrupt criticiſm.

But as Dr. W. is determined to enter into no anonymous diſputes, which would violate the equitable principles adopted in *this* Journal, he requeſts that gentleman to place himſelf firſt on an equal footing with thoſe whoſe works he has undertaken to cenſure; and he may reſt aſſured that Dr. W. on this occaſion, acts from no other motives than thoſe dictated by truth and juſtice; a duty which he owes to himſelf and the community.—*Medicus ratione utens nunquam alterum invidioſe calumniabitur*; *ſic enim animi impotentiam prodet.*

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* Vid. our Journal, No. I. p. 2, and No. IV. p. 313 and foll.
† Vid. our Journal, Vol. I. p. 404.

CRITICAL

CRITICAL RETROSPECT

OF

MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

MEDICAL PHILOSOPHY.

Physiologie philosophisch bearbeitet: i. e. A Philosophic System of Physiology, by CHARLES CHRISTIAN ERHARD SCHMID, Professor of Divinity at Jena. Volume First, 1798. xxxiv. and 362 pp. Volume Second, 1799. viii. and 670 pp. 8vo. (price two rixdoll. and 18 grosch, or 11s. in sheets) *Jena*, in the shop of the University.

THE Author of this elaborate work, though engaged in the active pursuits of a different profession, as here ventured upon an inquiry, not only the most important, but likewise the most difficult that could have been undertaken in the whole department of medicine; he is therefore justly entitled to the approbation of the medical world, even though he should not have succeeded in every part of this arduous attempt.

Prof. Schmid has, on former occasions, distinguished himself among the German literati by his excellent philosophical treatises on a variety of subjects, but especially by his commentaries on the Critical System of Philosophy, of which he is an able and strenuous advocate. It would, however, be foreign to explain, in this place, the nature and tendency of his philosophical writings, from which those persons, who are apt to confound the Critical System with others of a political nature, might easily learn how far *medicine* has been the object of these inquiries, and whether it is likely to deriv from them any practical advantages. Yet, in order to characterise the spirit of these volumes, we shall only observe, that the reverend author writes in the most unassuming language; that he treats others who differ from him in opinion with the greatest candour and liberality; that he does justice to the merits of his predecessors, even on those occasions where he is obliged to refute their errors; and that he never deviates from the opinions of other physiologists, without supporting his propositions by arguments, at once evident and conclusive.

If we consider medicine as a science, or as a system of rules, it unquestionably, with all its collateral and auxiliary branches, forms a principal department of physics, or experimental philosophy. The knowledge of medicine, at present, however, consists chiefly and almost entirely, of a collection of individual observations systematically

tematically arranged; from which useful rules, confirmed by experience, have been deduced for practical purposes. Indeed, it must be allowed, that we are not yet in the possession of scientific proofs or analytical demonstrations of these rules, so that we might reduce them to first and general principles; our induction for ascertaining their reality and occasional application cannot be derived from arguments sufficiently established in theory; and consequently such rules, hitherto, have had no *scientific* but merely a *technical* value and character.

Medicine, on the other hand, considered as an art, is still in its infancy; an assertion which no candid or honest practitioner will attempt to controvert. Even for the most valuable therapeutical, and especially the dietetic, discoveries and improvements, we are more indebted to accidental observations and analogical conjectures, than to a well-established or scientific theory. The *modus operandi* of all the remedies employed in therapeutics, as well as the articles of diet, is so far inexplicable and obscure, that the whole difference between those which are called *rational*, and others which, by way of pre-eminence, are termed *specific*, depends merely on the compass of a rule, by which the technical application of the remedy is in every instance determined. So long, however, as medicine has, and is obliged to have, recourse to specific remedies, it must necessarily remain an empirical art. And in spite of those persons who, from a mistaken zeal for the honour of their profession, are anxious to vindicate its imperfections, it still remains destitute of scientific principles, and is in quest of a systematic form.

Notwithstanding the defects of what has hitherto, by usurpation, been called medical science, we may discover a cogent and constant desire in the human mind to reduce the phænomena of organized animal bodies to general principles; to explain from these, by scientific deduction, the most suitable technical method, not merely in an empirical but philosophic manner; to vindicate our medical treatment *a priori*, from the general laws of nature; and thus to effect a gradual, though indissoluble, connection between a scientific theory and practice. Every attempt hitherto made to establish a medical theory, as well as the present, is directed to that ultimate object. What Prof. Schmid terms "*Physiology treated philosophically*," is, in the work itself, called *Zoonomia*. Physiology ought to be the true basis of all medicine; consequently, it should comprise the Natural Philosophy of the human body; a system of laws relative to its corporeal powers; a more immediate application of the general doctines of *organic* and *animal* nature to the particular organization of man, and to the peculiar relation which his structure, as well as his animal economy, bears to the human mind; this, however, can be attempted in so far only as we possess a knowledge of the mind and its operations. Physiologists generally define this science to be the doctrine comprising the destination and functions of the parts of the human body, or the knowledge of its healthy state; this definition is not only extremely wavering and undetermined, but it is obviously defective and inaccurate. They in this manner

manner confound zoonomy with a very limitted and imperfect zoology; and the real execution of their physiological works does not even correspond to this circumscribed plan. Let us, for instance, make the experiment, and separate from the best elementary books on physiology we possess, whatever relates to mere zoography, and we shall find that the stock of true physiological knowledge, such as is the real and peculiar property of that science, is very confined and imperfect. And this small remainder chiefly consists of zoology, is limited merely to the healthy state of the body, and takes no notice whatever of the relations subsisting between other objects of nature and the changes to which animals are subject; though it must be admitted, that it is impossible to acquire a philosophical, or even an accurate and connected historical knowledge of those changes, without having studied the relations between animate and inanimate nature.

In a strict sense of the word, therefore, even the best works we possess on physiology, furnish us with little physiological knowledge. They scarcely contain distinct ideas of organization and animal œconomy, of life and vital powers, properly unfolded; in short, physiologists have uniformly neglected to treat of the laws by which the operations of animality are regulated; of their relations among themselves, and the influence which Nature produces upon them in consequence of her internal and external agency; of the principles of pathology, derived from organized animal nature; of the preservation of health and prolongation of life; of therapeutics, materia medica, &c.

In the present work, the author endeavours to ascertain the true and accurate limits of physiological science, and to give it that systematic form of which it is susceptible. He has carefully compared and made use of all the facts and observations collected by his predecessors; he has exhibited general ideas and principles abstracted from a number of scattered remarks and experimental methods of cure, in order to combine them into a simple theory; in short, he has boldly and successfully attacked every species of medical dogmatism, while he has unfolded and solved many paradoxical and contradictory assertions of theorists: by such attempts only, we may hope to obtain, at length, a complete system of physiology.

In the Introduction, Prof. Schmid gives the definition of this science, its objects, limits, and form; its origin, history, and methodical study. I. *A Philosophic View of Physiology*, or, strictly speaking, *Zoonomy*, the Science of the Laws of Animal Nature. The Zoonomia of Dr. Darwin, with all its undeniable merit, does not perfectly correspond to the idea which this term implies according to its etymology, and the analogy it bears to words of similar construction: yet we are not at this moment in possession of any work, whether foreign or domestic, which is better calculated to explain the doctrine of vital power. But the work of Professor Schmid was, nevertheless, the first which gave a distinct idea of this science, while it conveyed an appropriate term

term to distinguish it from others. Perhaps, a future inquirer, endued with equal talents, will be placed in a more favourable situation to form an highly interesting and scientifically arranged system, from the scattered writings of Natural Philosophers, Chemists, Anatomists, Zoologists, Physiologists, and Medical Practitioners.—II. *Definition of Zoonomy.* It is the science of animal nature, or of the nature of living beings: it describes its object in a general manner, while it marks the mode and form of the knowledge we acquire of subjects arranged under certain laws.—III. *Object of Zoonomy.* This cannot be any other but life, consequently animal nature, which originally and perceptibly is discoverable only within ourselves, since it rests upon an immediate internal perception. Hence, the attention of the zoonomist is principally directed to the most dignified and improved animal nature in man, which besides displays, in the greatest order and harmony, the whole amount of animated organization and power: it is, on this account, that the organic structure of man affords the most proper scale for instituting comparative reflections on all other species of animals.

[To be continued in our next Number.]

A New System of Physiology, comprehending the Laws by which Animated Beings in general, and the Human Species in particular, are governed in their several states of health and disease; by RICHARD SAUMAREZ, Surgeon to the Magdalen Hospital. The Second Edition, Two Volumes Octavo, pp. 890. London, Cox, Johnson, &c.

In the preface, the author informs us that "the especial object of "the ensuing work is to explore the nature of the principle of life, "and to assert its power; to investigate the attributes of organized "life, as the instruments by means of which the phænomena of or-"ganic action are accomplished, and the final cause of animated ex-"istence is attained."

Some of the sentiments, peculiar to this ingenious and indefatigable author, have already been laid before our readers in Volume II. pp. 242 and 321, &c.—Although we cannot coincide with him in all his opinions, we are convinced that no physiologist will read the work, without deriving from it pleasure and improvement.

Three Lectures upon Animal Life, delivered in the University of Pennsylvania; by BENJAMIN RUSH, M.D. Professor of the Institutes of Medicine, and of Clinical Practice in the said University. Published at the request of his Pupils, 8vo. pp. 84. *Philadelphia.* Dobson.

From a short but manly preface, the learned medical veteran of America observes, that although he did not think these Lectures fit for the public eye, he has, in consequence of the repeated application of his pupils, complied with their request, and been prevailed upon to commit them to the press, in their present imperfect state.

ſtate. He farther, with a laudable modeſty, diſclaims the merit "of being the author of the great and original conception upon "which they are founded. I have done," ſays he, "but little "more than carry the hod to aſſiſt in completing part of a fabric, "the foundations of which were laid by two of the moſt diſtin-"guiſhed maſter builders in medicine in the eighteenth century."

In a ſpirited and well-written introduction, the author unfolds the principle and extent of his lectures, in the following words:

"Some of theſe ſubjects will be new in lectures upon the inſtitute of medicine, particularly thoſe which relate to morals, metaphyſics, and theology. However thorny theſe queſtions may appear, we muſt approach and handle them; for they are intimately connected with the hiſtory of the faculties and operations of the human mind; and theſe form an eſſential part of the animal œconomy. Perhaps it is becauſe phyſicians have hitherto been reſtrained from inveſtigating and deciding upon theſe ſubjects, by an erroneous belief that they belong excluſively to another profeſſion, that phyſiology has ſo long been an obſcure and conjectural ſcience.

"In beholding the human body, the firſt thing that ſtrikes us is its LIFE. This, of courſe, ſhould be the firſt object of our inquiries. It is a moſt important ſubject; for the end of all the ſtudies of a phyſician is to preſerve life; and this cannot be perfectly done, until we know in what it conſiſts.

"I include in animal life, as applied to the human body, *motion*, *ſenſation* and *thought*. Theſe three, when united, compoſe perfect life. It may exiſt without thought or ſenſation; but neither ſenſation nor thought can exiſt without motion. The loweſt grade of life probably exiſts in the abſence of even motion, as I ſhall mention hereafter. I have preferred the term *motion* to thoſe of oſcillation and vibration, which have been employed by Dr. Hartley in explaining the laws of animal matter; becauſe I conceive it to be more ſimple, and better adapted to common apprehenſion.

"In treating upon this ſubject, I ſhall firſt conſider animal life as it appears in the waking and ſleeping ſtates in a healthy adult, and ſhall afterwards inquire into the modification of its cauſes, in the fœtal infant, youthful and middle ſtates of life, in certain diſeaſes, in different ſtates of ſociety, in different climates, and in different animals."

After this introductory analyſis, the author lays down three general propoſitions, from which we extract the following particulars, and occaſional illuſtrations:

"I. Every part of the human body, the nails and hair excepted, is endowed with ſenſibility, or excitability, or with both.

"II. The whole human body is ſo formed and connected, that impreſſions made, in the healthy ſtate, upon one part, excite motion, or ſenſation, or both, in every other part of the body.

"III. Life is the EFFECT of certain ſtimuli acting upon the ſenſibility and excitability, which are extended in different degrees to every external and internal part of the body. Theſe ſtimuli are as neceſſary to its exiſtence as air is to flame. Animal life is

truly, to uſe the words of Dr. Brown, "a forced ſtate." I have ſaid, the *words* of Dr. Brown; for the opinion was delivered by Dr. Cullen, in the Univerſity of Edinburgh, in the year 1766, and was detailed by me in this ſchool, many years before the name of Dr. Brown was known as a teacher of medicine. It is true, Dr. Cullen afterwards deſerted it; but it is equally true, I never did; and the belief of it has been the foundation of many of the principles and modes of practice in medicine, which I have ſince adopted. In a lecture which I delivered in the year 1771, I find the following words, which are taken from a manuſcript copy of lectures given by Dr. Cullen, in the Inſtitutes of Medicine: "The human body is not an automaton, or ſelf-moving machine; but is kept alive and in motion by the conſtant action of ſtimuli upon it." In thus aſcribing *the diſcovery of the cauſe of life*, which I ſhall endeavour to eſtabliſh, to Dr. Cullen, let it not be ſuppoſed I mean to detract from the genius and merits of Dr. Brown. To his *intrepidity* in reviving and propagating it, as well as for the many other truths contained in his ſyſtem of medicine, poſterity, I have no doubt, will do him ample juſtice, after the errors that are blended with them, have been corrected by their unſucceſsful application to the cure of diſeaſes."

In this candid and honeſt declaration, we at once diſcover the genuine ſpirit of the Tranſatlantic philoſopher, while we are taught a practical leſſon, how to appreciate the merits of others, without becoming the inſtruments of a party, or beſtowing unlimited praiſe upon a diſcovery, merely becauſe it bears the ſemblance of novelty. The ingenious author next proceeds to remark, "that the action of the brain, the diaſtole and ſyſtole of the heart, the pulſation of the arteries, the contraction of the muſcles, the periſtaltic motion of the bowels, the abſorbing power of the lymphatics, ſecretion, excretion, hearing, ſeeing, ſmelling, taſte, and the ſenſe of touch, nay more, thought itſelf, are all the effects of ſtimuli acting upon the organs of ſenſe and motion. Theſe ſtimuli have been divided into external and internal. The external are, light, ſound, odours, air, heat, exerciſe, and the pleaſures of the ſenſes. The internal ſtimuli are food, drinks, chyle, the blood, a certain tenſion of the glands which contain ſecreted liquors, and the exerciſes of the faculties of the mind; each of which I ſhall treat in the order in which they have been mentioned."—p. 8.

As a ſpecimen of the original and entertaining manner in which the author treats of the different external ſtimuli, we extract the following:

"*Sound* has an extenſive influence upon human life. Its numerous artificial and natural ſources need not be mentioned. I ſhall only take notice that the currents of winds, the paſſage of inſects through the air, and even the growth of vegetables, are all attended with an emiſſion of ſound; and although they become imperceptible from habit, yet there is reaſon to believe, they all act upon the body, through the medium of the ears. The exiſtence of theſe ſounds is eſtabliſhed by the reports of perſons who have aſcended

cended two or three miles from the earth in a balloon. They tell us, that the ſilence which prevails in thoſe regions of the air is ſo new and complete, as to produce an awful ſolemnity in their minds. It is not neceſſary that theſe ſounds ſhould excite ſenſation, or perception, in order to their exerting a degree of ſtimulus upon the body. There are a hundred impreſſions daily made upon it, which, from habit, are not followed by ſenſation. The ſtimulus of aliment upon the ſtomach, and of blood upon the heart and arteries, probably ceaſe to be felt, only from the influence of habit. The exerciſe of walking, which was originally the reſult of a deliberate act of the will, is performed from habit without the leaſt degree of conſciouſneſs. It is unfortunate for this, and many other parts of phyſiology, that we forget what paſſed in our minds the firſt two or three years of our lives. Could we recollect the manner in which we acquired our firſt ideas, and the progreſs of our knowledge, with the evolution of our ſenſes and faculties, it would relieve us from many difficulties and controverſies upon this ſubject. Perhaps this forgetfulneſs by children, of the origin and progreſs of their knowledge, might be remedied by our attending more cloſely to the firſt effects of impreſſions, ſenſation and perception upon them, as diſcovered by their little actions; all of which probably have a meaning as determined as any of the actions of men or women.

"The influence of ſounds of a certain kind in producing excitement, and thereby increaſing life, cannot be denied. Fear produces debility, which is a tendency to death. Sound obviates this debility, and thus reſtore the ſyſtem to the natural and healthy grade of life. The ſchool-boy and the clown invigorate their feeble and trembling limbs, by whiſtling or ſinging as they paſs by a country church-yard; and the ſoldier feels his departing life recalled in the onſet of a battle by the noiſe of the fife, and of the poet's "ſpirit-ſtirring drum." Intoxication is frequently attended with a higher degree of life than is natural. Now, ſound we know will produce this with a very moderate portion of fermented liquor; hence, we find men are more eaſily and highly excited by it at public entertainments, where there is muſic, loud talking, and hallooing, than in private companies, where there is no auxiliary ſtimulus added to that of the wine. I wiſh theſe effects of ſound upon animal life to be remembered, for I ſhall mention it hereafter, as a remedy for the weak ſtate of life in many diſeaſes, and ſhall relate an inſtance, in which a ſcream ſuddenly extorted by grief, proved the means of reſuſcitating a perſon, who was ſuppoſed to be dead, and who had exhibited the uſual recent marks of the extinction of life. I ſhall conclude this head by remarking, that perſons who are deſtitute of hearing and ſeeing, poſſeſs life in a more languid ſtate than other people; and hence ariſe the dulneſs and want of ſpirits which they diſcover in their intercourſe with the world."

[To be continued in our next Number.]

CHEMISTRY.

Handbuch der theoretiſchen und praktiſchen Chemie, i. e. A Manual of the Theory and Practice of Chemiſtry, by J. F. A. Göttling, Profeſſor in the Univerſity of Jena, and Member of ſeveral learned ſocieties. Part I. containing the theory, 1798. Part II. containing the practice, 1799; together 1689 pp. 8vo. (Price 3 rixdollars 4 gr. or about 13 ſhillings.) *Jena*, in the Academical Shop.

THIS new work of M. Göttling contains the principles of a ſcience which the celebrated author has long and ſucceſsfully cultivated; he has enriched it with many important obſervations and experiments, as well as every new fact and diſcovery which he had an opportunity of demonſtrating in his lectures to an audience that, in point of number and reſpectability, has been equal to that of the celebrated Dr. Black, at Edinburgh.

The plan adopted by the author, as well as his method of treating the different objects of chemiſtry, together with his endeavours to render this a complete elementary work of that uſeful ſcience, deſerve every commendation. As our limits do not permit us to give an analytical view of this work, we ſhall content ourſelves with making a few general obſervations on the theory peculiar to Mr. Göttling. From the lateſt experiments he appears to be convinced, that the pureſt oxygen gas, on being treated with phoſphorus at a low temperature, is changed into azotic gas; that conſequently the latter ſpecies of air contains the ſame ponderable baſis as the former; and that azote, though its exiſtence has been admitted in other combinations, upon the authority of Lavoiſier, neither exiſts here nor in azotic gas. Caloric is by him conſidered as a fluid which ſo readily penetrates all bodies, that for this very reaſon it is not ponderable by any apparatus which could poſſibly be invented; and though he does not enter into an inveſtigation of the materiality or immateriality of this ſubſtance, or the cauſe of heat, yet it is pretty evident from his details, that he ſuppoſes it to approach to ſomething of a material nature; for the properties which he attributes to it, can be predicated only of matter. This ſubſtance appears in other reſpects to be intimately connected with the cauſe of light, and in this combination forms fire; while its elaſtic property ſeems to be conſiderably raiſed or increaſed by light; and in this aſſociation, together with oxygen, it forms the nitric acid. But whether light and heat are the ſame ſubſtance, and whether their different effects depend upon certain undetermined modifications, or whether that which is called light, in its combination with the bodies it meets with on its paſſage, is changed into what we term heat, on theſe queſtions we cannot decide with any degree of certainty at preſent: yet, we are leſs liable to be involved in hypotheſes, if we carefully ſeparate the phœnomena reſulting from fire, and admit light and heat as two ſimple ſubſtances diſtinct from each other. Light is, according to

him, a constituent part of all inflammable bodies, and neither sulphur, nor phosphorus, the metals, &c. make any exception from this general rule; for the first mentioned substance is composed of the base of sulphur and the cause of light, phosphorus of its own base and a similar cause, and the metals cannot be otherwise accounted for, because in them the cause of light is combined with peculiar metallic bases. Hence, the base of sulphur forms combinations of a particular kind with the bases of metals; and such were the productions obtained by the Dutch chemists, who, in their experiments upon the disengagement of light, could not effect the combustion of sulphur, though they heated that substance with metals, in various species of factitious airs.

[To be continued in our next Number.]

A General View of the Nature and Objects of Chemistry, and its Application to Arts and Manufactures; by WILLIAM HENRY, Member of the Royal Medical and Natural History Societies of Edinburgh, &c. 8vo. pp. 44. 1s. 1799. Johnson.

THIS interesting pamphlet contains the substance of an introductory address to a course of chemical lectures delivered by the author, at Manchester, during the last winter. As Mr. Henry proposes to repeat these lectures, he was induced to publish their objects and plan; especially as, in his opinion, this sketch affords a more ample detail than has, perhaps, been hitherto given of the *general uses and applications of chemistry*.

Instead of filling these pages with the barren history of chemical science, and amusing the reader with the biography of those deluded mortals who seem to have vied with each other in wasting their time in idle speculations, and the absurd pursuits of alchemy and astrology, the author has, in these few sheets, substituted a brief view of the nature and objects of chemistry, of its connection with the arts and other sciences, and an outline of the plan on which the following lectures will be conducted.

"Natural Philosophy," says he, "in its most extensive sense, is a term comprehending every science that has for its objects the properties and affections of matter. But it has attained, by the sanction of common language, a more limited signification; and chemistry, though strictly a branch of Natural Philosophy, is generally regarded as a distinct science. Between the two, it may perhaps be difficult to mark out precisely the line of separation; but, an obvious character of the facts of Natural Philosophy, is, that they are always attended with sensible motion; and the determination of the laws of motion is peculiarly the office of its cultivators. Chemical changes, on the other hand, of the most important kind, often take place without any apparent motion, either of the mass, or of its minute parts; and where the eye is unable to perceive that any change has occurred. The laws of gravitation, of central forces, and all the other powers that fall under the cognizance of the natural philosopher, produce, at most, only

a change of place in the bodies that are influenced by them. But, in chemical changes, we may always observe an important difference in the outward properties of things. Two highly corrosive substances, by uniting chemically together, may become mild and harmless; the combination of two colourless substances may present us with a compound of brilliant complexion, and the union of two fluids with a compact and solid mass.

"Chemistry, therefore, may be defined that science, whose object is to discover and explain the changes of composition, that occur among the integrant and constituent parts of bodies.

"From this definition, it may readily be conceived how wide is the range of chemical inquiry; and by applying it to the various events that daily occur in the order of Nature, we shall be enabled to separate them with accuracy, and to allot to the sciences of Natural Philosophy and Chemistry, the proper objects of the cultivation of each. Whenever a change of place is a necessary part of any event, we shall call in the aid of the former. When this condition may be dispensed with, we shall resort to Chemistry for the light of its principles; but it will be often found, that the concurrence of the two sciences is essential to the full explanation of phœnomena. The water of the ocean, for example, is raised into the atmosphere by its chemical combination with the matter of heat; but the clouds that are thus formed, maintain their elevated situation, by virtue of a specific gravity, less than that of the lower regions of the air; a law, whose discovery and application are due to the natural philosopher strictly so called."

MEDICINE AND SURGERY.

Essays on the Venereal Disease and its concomitant Affections; Part the Second; containing additional Evidence, with Critical and Practical Remarks, on the new Saline Antisyphilitic Remedies, and an Answer to some Objections made against the former Part. By WILLIAM BLAIR, A.M. F.M S. Surgeon of the Lock Hospital and Asylum, and of the Finsbury Dispensary, &c. 8vo. pp. 352, Six shillings in boards, 1799. London: SYMONDS, JOHNSON, &c.

The author appears to us, to have collected the facts with great diligence and perseverance, and he has exhibited them with commendable impartiality. His general inference is, that the new remedies cannot be relied upon for the *radical* cure of the *secondary* symptoms of syphilis, but that the nitrous or nitric acid, given "in conjunction or alternately with mercury," may be highly useful in promoting the cure. The cases in which the acid proves most beneficial, are pointed out, as well as the best method of employing it.

[To be continued in our next.]

Art

An Essay on the Means of lessening the Effects of Fire on the Human Body. By JAMES EARLE, Esq. Surgeon Extraordinary to the King, and to his Majesty's Household, and senior Surgeon to St. Bartholomew's Hospital, 8vo. pp. 44. with a plate, 1799. London. JOHNSON.

The means recommended by the author, consist in the speedy application of cold water, or water cooled by ice, which is to be renewed as often as it becomes warm. The cuticle of the burnt or scalded part is not to be removed; all stimulant and oily applications are to be avoided. By these means, the cure will be accomplished without leaving scars or lameness of the part.

"Since I discovered the advantage arising from ice," says Mr. Earle, "I have had many opportunities of using it on large and extensive burns, which have served to confirm me in my good opinion of its beneficial effects, whenever it has been timely and properly applied. In several cases it has happened that, either from motives of delicacy on the part of the patient, or from the attention of every one concerned being occupied with the most apparent injuries, parts which were burnt, have not been discovered in time to receive benefit from the cold application, in consequence of which the cuticle in those parts is separated, sloughs have formed and have been cast off, leaving sores difficult to be healed; while the parts in their neighbourhood, more severely burnt, but covered with ice, have escaped without a blemish.

"I could detail many instances of mischief prevented, and cures effected by these means; but as the progress of them was in general similar to the two cases already mentioned, it does not appear to be necessary to add to their testimony.

"I shall, however, take notice of one which occurred lately. A gentleman was much scalded by the overturning of a tea-urn; I saw him soon after the accident, and sent to the nearest confectioner for ice, with which the burnt parts were bathed; the heat and pain were soon lessened, and afterwards he felt very little inconvenience.

"Whether modern philosophers will allow that fire applied to any part of the human body does remain united to it for a time, I am not certain; but such appears to me to be the fact; and this opinion has, I find, been maintained by several very respectable authors.

"It follows, then," according to the foregoing observations, "that the sooner the ice is applied after the accident has happened, the better, as the fire will have less time to do mischief. If the application be deferred till blisters are formed, and sloughs produced, a great degree of ease may be obtained; but the destruction of the parts which has already taken place, cannot entirely be prevented from going through its usual course of sloughs and suppuration.

N. B. For want of room we have reluctantly been obliged to postpone our account of Dr. FOTHERGILL's *"Essay on the Preservation of Shipwrecked Mariners;* and Dr. HAYGARTH's *interesting Treatise on the Fictitious Tractors and Epidemical Convulsions.*

NEW

NEW MEDICAL PUBLICATIONS IN JANUARY.

An Inquiry into the Symptoms and Causes of Syncope Anginosa, commonly called Angina Pectoris; illustrated by Dissections. By CALEB HILLIER PARRY, M. D. &c. 4s. Cadell and Davies.

The Anatomy of the Gravid Uteris, with practical inferences relative to Pregnancy and Labour. By JOHN BURNS, Surgeon in Glasgow, 8vo. pp. 248. 5s. Longman and Rees.

Observations on the Diseases of Seamen. By GILBERT BLANE, M. D. &c. &c. The third edition, with corrections and additions, 8vo. p. 626. 9s. Murray and Highley.

A Treatise on Sugar, with miscellaneous Medical Observations. By BENJAMIN MOSELY, M. D. &c. 8vo. 6s. 6d. Robinsons.

Some few Cases and Observations on the Treatment of Fistula in Ano, Hæmorrhage, Mortification, the Venereal Disease, and Strictures of the Urethra. By JOHN ANDREE, M. D. &c. 1s. 6d. G. and W. Nicol.

The Anatomists Vade Mecum, containing the Anatomy and Physiology of the Human Body. By ROBERT HOOPER, M. D. F. L. S. &c. second edition, revised and enlarged, 3s. 6d. Murray and Highley.

A Letter to Mr. Ogden, on the Cæsarean Operation. By G. TOMLINSON, 8vo. pp. 20. 1s. *Manchester*, I. and W. Clarke.

NEW MEDICAL PUBLICATIONS IN GERMANY.

[Imported by C. Geisweiler, No. 42, Parliament Street.]

De Penitiori Ossium Structura Commentarius, Auctore ANTONIO SCARPA, in ticinensi gymnasio anatomes et chirurgiae clinices professore, &c. &c. gr. 4to. vellum paper, hot pressed, cuts, 14s. 1799. *Leipzig.*

De Morbis Ligamentorum ex materiei animalis mixtura, et Structura mutata cognoscendis, Auctor GODOFREDUS GOETZ, Gedanensis, cum observatione Mecrelii, 4to. 5s. cuts, sewed, 1799. *Berlin.*

MARTIN CHRISTIAN GOTTLIEB LEHMANN, Holsati, Seminari Regii Philologici Sodalis; de Sensibus externis Animalium exsanguium Insectorum scilicet ac Vermium Comentatio, in certamine literario civium Academiæ Georgiæ Augustæ, præmio a rege M. Britaniæ aug. constituto, ab illustri Medicorum ordine ornata, 4to. 2s. 6d. sewed, 1799. Göttingen.

[*The list of French publications in our next.*]

TO CORRESPONDENTS.

The Extracts mentioned by Dr. Harrington have not been received.

Mr. Martineau's Communication has been mislaid, and we shall be obliged to him for a Copy of it.

The numerous Applications respecting the most approved Medical Thermometers will be answered in our next.

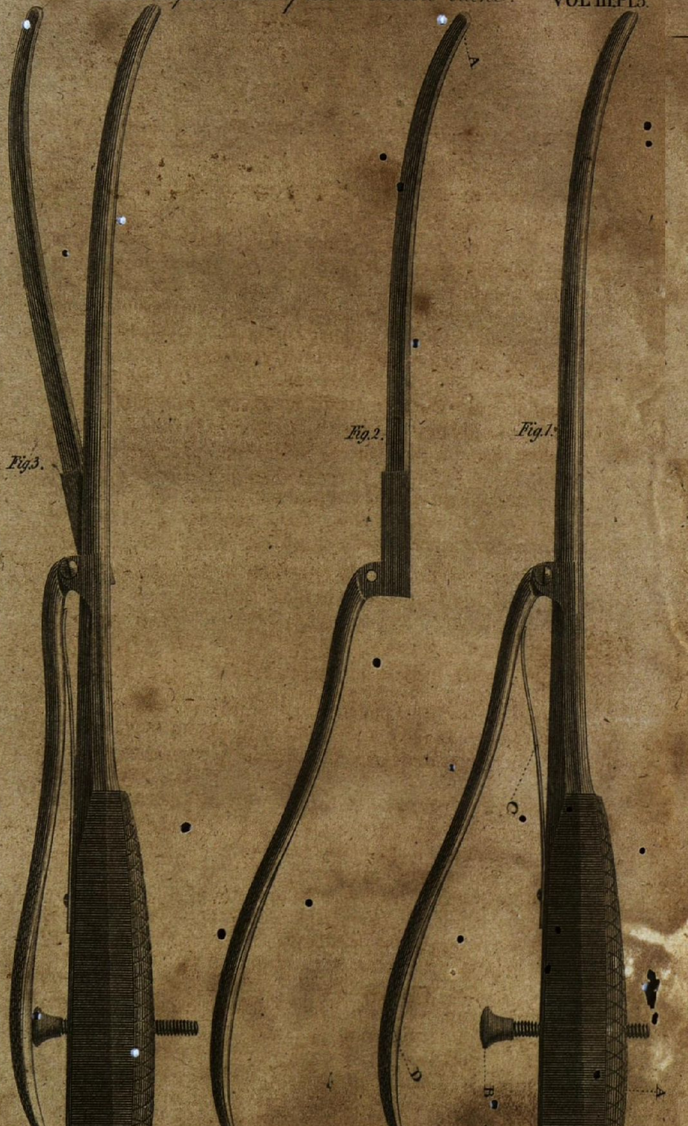
Mr. Watt's Improvement of Frere Coom's Instrument is received.

ERRATUM.

No. XI. page 92, line 6, for *cows*, read *cases*.

An improvement of the Bistoire caché.

Medical Jounal.
VOL III PL 5.



N.B. The figures are reversed in this plate, and cutting edge turned towards the left hand, the mistake may be rectified by viewing them through the blank side of the paper.

Engraved by Lowry.